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SECTION 1. IDENTIFICATION

Company name Todol Products

25 Washington Ave

USA Natick, MA 01760

PO BOX 398

Telephone : 1-800-252-3818

Telefax : 508-651-0729

E-mail address : info@todol.com

Emergency telephone : 24/7 USA: 800-535-5053

24/7 Global: 352-323-3500

Recommended use of the

chemical and restrictions on

use

: For further information, refer to product data sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable aerosols : Category 1

Gases under pressure : Compressed gas

Skin irritation : Category 2

Eye irritation : Category 2B

Respiratory sensitization : Category 1

Skin sensitization : Category 1

Carcinogenicity : Category 2

Specific target organ toxicity :

- single exposure

Category 3 (Respiratory system)

Specific target organ toxicity

- repeated exposure

(Inhalation)

: Category 2

GHS label elements

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Hazard pictograms









Signal Word : Danger

Hazard Statements : H222 Extremely flammable aerosol.

H280 Contains gas under pressure; may explode if heated.

H315 + H320 Causes skin and eye irritation. H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing diffi-

culties if inhaled.

H335 May cause respiratory irritation. H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or re-

peated exposure if inhaled.

Precautionary Statements : P101 If medical advice is needed, have product container or la-

bel at hand.

P102 Keep out of reach of children.

Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dusts or mists.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing must not be allowed out of the workplace.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P284 Wear respiratory protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention

P342 + P311 If experiencing respiratory symptoms: Call a

POISON CENTER/ doctor.

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P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P410 + P403 Protect from sunlight. Store in a well-ventilated place.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labeling

There are no ingredients with unknown acute toxicity used in a mixture at a concentration >= 1%.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Components

Chemical name	CAS-No.	Classification	Concentra- tion (% w/w)
Castor oil, polymer with polymeth- ylenepolyphenylene isocyanate	67700-69-0	Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 STOT RE 2; H373	>= 50 - < 70
Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2B; H320 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 STOT RE 2; H373	>= 10 - < 20
isobutane	75-28-5	Flam. Gas 1; H220	>= 5 - < 10
Tris(2-chloro-1-methylethyl) phosphate	13674-84-5	Acute Tox. 4; H302	>= 5 - < 10
Aromatic prepolymer, polyether based	58228-05-0	Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 STOT RE 2; H373	>= 5 - < 10
propane	74-98-6	Flam. Gas 1; H220	>= 1 - < 5

Actual concentration is withheld as a trade secret

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SECTION 4. FIRST AID MEASURES

General advice Move out of dangerous area.

Consult a physician.

Show this material safety data sheet to the doctor in attend-

ance.

If inhaled Move to fresh air.

In case of skin contact Take off contaminated clothing and shoes immediately.

> Wash off with soap and plenty of water. If symptoms persist, call a physician.

Remove contact lenses. In case of eye contact

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist.

If swallowed Clean mouth with water and drink afterwards plenty of water.

Do not induce vomiting without medical advice.

Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.

Obtain medical attention.

Most important symptoms and effects, both acute and

delayed

irritant effects

sensitizing effects Asthmatic appearance

Cough

Respiratory disorder Allergic reactions

Causes skin and eye irritation. May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficul-

ties if inhaled.

May cause respiratory irritation. Suspected of causing cancer.

May cause damage to organs through prolonged or repeated

exposure if inhaled.

Notes to physician Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Water spray jet

> Dry powder Foam

Carbon dioxide (CO2)

Unsuitable extinguishing me- :

Water

dia

High volume water jet

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Hazardous combustion prod: :

ucts

Carbon dioxide (CO2)

Carbon monoxide Nitrogen oxides (NOx)

Hydrogen cyanide (hydrocyanic acid)

Chlorine compounds

Further information : Use water spray to cool unopened containers.

Collect contaminated fire extinguishing water separately. This

must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations.

Special protective equipment :

for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- :

tive equipment and emer-

gency procedures

Use personal protective equipment.

Deny access to unprotected persons.

Environmental precautions : Do not flush into surface water or sanitary sewer system.

If the product contaminates rivers and lakes or drains inform

respective authorities.

Local authorities should be advised if significant spillages can-

not be contained.

Methods and materials for

containment and cleaning up

Allow to solidify, use mechanical handling equipment.

Ventilate the area.

SECTION 7. HANDLING AND STORAGE

Advice on protection against

fire and explosion

Keep away from heat/ sparks/ open flames/ hot surfaces. No

smoking.

Do not spray on a naked flame or any incandescent material.

Take precautionary measures against electrostatic dis-

charges.

Advice on safe handling : Avoid exceeding the given occupational exposure limits (see

section 8).

Do not get in eyes, on skin, or on clothing. For personal protection see section 8.

Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is

being used.

Smoking, eating and drinking should be prohibited in the appli-

cation area.

Take precautionary measures against static discharge. Open drum carefully as content may be under pressure.

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Follow standard hygiene measures when handling chemical

products.

Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun

exposure and temperatures over 122 °F. Do not open by force or throw into fire even after use. Do not spray on flames or

red-hot objects.

Store in original container. Keep in a well-ventilated place. Observe label precautions.

Store in accordance with local regulations.

Materials to avoid : Explosives

Poisonous gases Poisonous liquids Radioactive Substances

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	С	0.02 ppm 0.2 mg/m3	OSHA Z-1
		С	0.02 ppm 0.2 mg/m3	OSHA P0
		TWA	0.005 ppm	ACGIH
isobutane	75-28-5	STEL	1,000 ppm	ACGIH
propane	74-98-6	TWA	1,000 ppm 1,800 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,800 mg/m3	OSHA P0

The above constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Engineering measures : Use of adequate ventilation should be sufficient to control

worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recom-

mended or statutory limits.

The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

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Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed

respirator complying with an approved standard if a risk as-

sessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aero-sol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing ap-

paratus must be used.

Hand protection : Chemical-resistant, impervious gloves complying with an ap-

proved standard should be worn at all times when handling chemical products if a risk assessment indicates this is nec-

essary.

Eye protection : Safety eyewear complying with an approved standard should

be used when a risk assessment indicates this is necessary.

Skin and body protection : Choose body protection in relation to its type, to the concen-

tration and amount of dangerous substances, and to the spe-

cific work-place.

Hygiene measures : Avoid contact with skin, eyes and clothing.

Wash hands before breaks and immediately after handling

the product.

Remove respiratory and skin/eye protection only after vapors

have been cleared from the area.

Remove contaminated clothing and protective equipment be-

fore entering eating areas. Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Chemicals under pressure

Color : various

Odor : ether-like

Odor Threshold : No data available

pH : Not applicable substance/mixture reacts with water

Melting point/range / Freezing

point

No data available

Boiling point/boiling range : No data available

Flash point : Not applicable

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Evaporation rate : No data available

Flammability (solid, gas) : Extremely flammable aerosol.

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapor pressure : 5100 hpa

Relative vapor density : No data available

Density : ca. 0.95 g/cm3 (73 °F / 23 °C)

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-oc-

tanol/water

: No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : Not applicable

Explosive properties : No data available

Oxidizing properties : No data available

Volatile organic compounds

(VOC) content

207 g/l

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : The product is chemically stable.

Possibility of hazardous reac-

tions

Stable under recommended storage conditions.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxidizing agents

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Hazardous decomposition

products

: No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified due to lack of data.

Components:

Castor oil, polymer with polymethylenepolyphenylene isocyanate:

Acute oral toxicity : LD50 Oral (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 423

Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): 1.5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Expert judgment

Remarks: Based on data from similar materials

Diphenylmethanediisocyanate, isomeres and homologues:

Acute oral toxicity : LD50 Oral (Rat): > 10,000 mg/kg

Acute inhalation toxicity : LC50: 1.5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Expert judgment

Assessment: The component/mixture is moderately toxic after

short term inhalation.

Acute dermal toxicity : LD50 Dermal (Rabbit): > 9,400 mg/kg

Aromatic prepolymer, polyether based:

Acute oral toxicity : LD50 Oral (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 423

Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): 1.5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Expert judgment

Remarks: Based on data from similar materials

Skin corrosion/irritation

Causes skin irritation.

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Components:

Castor oil, polymer with polymethylenepolyphenylene isocyanate:

Species : reconstructed human epidermis (RhE)

Exposure time : < 1 h

Method : OECD Test Guideline 439

Result : No skin irritation

Remarks : Based on data from similar materials

Aromatic prepolymer, polyether based:

Species : reconstructed human epidermis (RhE)

Exposure time : < 1 h

Method : OECD Test Guideline 439

Result : No skin irritation

Remarks : Based on data from similar materials

Serious eye damage/eye irritation

Causes eye irritation.

Components:

Castor oil, polymer with polymethylenepolyphenylene isocyanate:

Species : Not tested on animals Result : No eye irritation

Method : OECD Test Guideline 492

Remarks : Based on data from similar materials

Aromatic prepolymer, polyether based:

Species : Not tested on animals Result : No eye irritation

Method : OECD Test Guideline 492

Remarks : Based on data from similar materials

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components:

Castor oil, polymer with polymethylenepolyphenylene isocyanate:

Test Type : Local lymph node assay (LLNA)

Routes of exposure : Dermal Species : Mouse

Method : OECD Test Guideline 442B

Result : May cause sensitization by skin contact.

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Remarks : Based on data from similar materials

Aromatic prepolymer, polyether based:

Test Type : Local lymph node assay (LLNA)

Routes of exposure : Dermal Species : Mouse

Method : OECD Test Guideline 442B

Result : May cause sensitization by skin contact.
Remarks : Based on data from similar materials

Germ cell mutagenicity

Not classified due to lack of data.

Components:

Castor oil, polymer with polymethylenepolyphenylene isocyanate:

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)

Metabolic activation: with and without metabolic activation Method: Mutagenicity (Escherichia coli - reverse mutation as-

say)

Result: negative

Remarks: Based on data from similar materials

Aromatic prepolymer, polyether based:

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)

Metabolic activation: with and without metabolic activation Method: Mutagenicity (Escherichia coli - reverse mutation as-

say)

Result: negative

Remarks: Based on data from similar materials

Carcinogenicity

Suspected of causing cancer.

IARC Not applicable

OSHA Not applicable

NTP Not applicable

Reproductive toxicity

Not classified due to lack of data.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure if inhaled.

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

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Aspiration toxicity

Not classified due to lack of data.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Castor oil, polymer with polymethylenepolyphenylene isocyanate:

Toxicity to fish : LL50 (Fish): > 100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

EC50 (algae): > 100 mg/l Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Diphenylmethanediisocyanate, isomeres and homologues:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 1,000 mg/l

Exposure time: 96 h

Toxicity to algae/aquatic

plants

EC50 (Desmodesmus subspicatus (green algae)): > 1,640

mg/l

Aromatic prepolymer, polyether based:

Toxicity to fish : LL50 (Fish): > 100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

EC50 (algae): > 100 mg/l Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

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Persistence and degradability

Components:

Castor oil, polymer with polymethylenepolyphenylene isocyanate:

Biodegradability : aerobic

Result: Not readily biodegradable.

Testing period: 28 d Exposure time: 28 d

Kinetic: 28 d: 1.5 %

Method: OECD Test Guideline 301F

Remarks: Based on data from similar materials

Aromatic prepolymer, polyether based:

Biodegradability : aerobic

Result: Not readily biodegradable.

Testing period: 28 d Exposure time: 28 d

Kinetic: 28 d: 1.5 %

Method: OECD Test Guideline 301F

Remarks: Based on data from similar materials

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological infor-

mation

Do not empty into drains; dispose of this material and its con-

tainer in a safe way.

Avoid dispersal of spilled material and runoff and contact with

soil, waterways, drains and sewers.

Global warming potential

Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) of the United Nations Framework Convention on Climate Change (UNFCCC)

Components:

propane:

20-year global warming potential: 0.072 100-year global warming potential: 0.02 500-year global warming potential: 0.006

Atmospheric lifetime: 0.036 yr

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Radiative efficiency: 0 Wm2ppb

Further information: Miscellaneous compounds

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues Disposal of this product, solutions and any by-products should

> at all times comply with the requirements of environmental protection and waste disposal legislation and any regional lo-

cal authority requirements.

Empty containers should be taken to an approved waste han-Contaminated packaging

dling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN 1950 UN/ID No.

Proper shipping name Aerosols, flammable

Class : 2.1

: Not assigned by regulation Packing group

Labels Flammable Gas 203

Packing instruction (cargo

aircraft)

Packing instruction (passen: 203

ger aircraft)

IMDG-Code

UN number UN 1950 **AEROSOLS** Proper shipping name

Class 2.1

Packing group : Not assigned by regulation

Labels 2.1 EmS Code F-D, S-U Marine pollutant no

Domestic regulation

49 CFR

UN 1950 UN/ID/NA number Proper shipping name : Aerosols

Class 2.1

Packing group Not assigned by regulation

FLAMMABLE GAS Labels

ERG Code 126 Marine pollutant no

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Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

TSCA list : All chemical substances in this product are either listed as ac-

tive on the TSCA Inventory or are in compliance with a TSCA

Inventory exemption.

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)

Gases under pressure

Respiratory or skin sensitization

Carcinogenicity

Specific target organ toxicity (single or repeated exposure)

Skin corrosion or irritation

Serious eye damage or eye irritation

SARA 313 : The following components are subject to reporting levels es-

tablished by SARA Title III, Section 313:

Diphenylme- 9016-87-9 >= 10 - < 20 %

thanediisocyanate, isomeres and homologues

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

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SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

OSHA P0 : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated

values)

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-

its for Air Contaminants

ACGIH / TWA : 8-hour, time-weighted average ACGIH / STEL : Short-term exposure limit OSHA P0 / TWA : 8-hour time weighted average

OSHA P0 / C : Ceiling limit

OSHA Z-1 / TWA : 8-hour time weighted average

OSHA Z-1 / C : Ceiling

Notes to Reader

The data contained herein are furnished for information only and are believed to be reliable. However, Todol Products (hereafter Todol) does not assume responsibility for any results obtained by persons over whose methods Todol has no control. It is the user's responsibility to determine the suitability of Todol's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Todol specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Todol's products. Todol further disclaims any liability for consequential or incidental damages of any kind, including lost profits. This Safety Data Sheet has been generated based on OSHA Hazard Communication Standard (29 CFR 1910.1200) and provides information in accordance with U.S. federal law only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Todol for additional assistance.

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