SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Basafilm Twin Gazon

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture: Fertilizer

1.3 Details of the supplier of the safety data sheet

Company: COMPO EXPERT GmbH
Kroegerweg 10
D-48155 Münster

Telephone: +49 (0) 251 29 79 81 – 000
Telefax: +49 (0) 251 29 79 81 - 111
E-mail address of person responsible for the SDS: info@compo-expert.com

1.4 Emergency telephone number

Quality / Safety / Environment
Telephone: +49 (0) 2151 - 579 - 0

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)
Hazard statements: Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Further information: German "Hazardous Substances" legislation (Gefahrstoffverordnung) appendix I, No. 5 (Ammonium Nitrate group C III)

2.3 Other hazards
None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature: Fertilizer
NPK - fertilizer contains: N,N’-(2-Methylpropyliden)-bis-urea, ammonium nitrate, potassium salt, ammonium salt, phosphate, magnesium salt, calcium salt, trace element combination.

### Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Registration number</th>
<th>Concentration (% w/w)</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>ammonium nitrate</td>
<td>6484-52-2</td>
<td>229-347-8</td>
<td>01-2119490981-27-XXXX</td>
<td>&gt;= 10 - &lt;= 45</td>
<td>Ox. Sol. 3; H272 Eye Irrit. 2; H319</td>
</tr>
<tr>
<td>Boric acid</td>
<td>11113-50-1</td>
<td>234-343-4</td>
<td>01-2119486683-25-XXXX</td>
<td>&lt;= 0,2</td>
<td>Repr. 1B; H360FD</td>
</tr>
<tr>
<td>N,N’-(isobutylidene)diurea</td>
<td>6104-30-9</td>
<td>228-055-8</td>
<td>01-2119457269-28-XXXX</td>
<td>&gt;= 10 - &lt;= 45</td>
<td></td>
</tr>
</tbody>
</table>

For explanation of abbreviations see section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

**General advice**: Wash hands with water as a precaution.

**If inhaled**: Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. Obtain medical attention. In case of lung irritation, first treatment with dexametason aerosol (spray).

**In case of skin contact**: Wash off with plenty of water.

**In case of eye contact**: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**: Clean mouth with water and drink afterwards plenty of water. Call a physician immediately.

#### 4.2 Most important symptoms and effects, both acute and delayed

**Symptoms**: Ingestion may provoke the following symptoms: Methaemoglobinemia. Inhalation of decomposition products in high concentration may cause shortness of breath (lung oedema).
Material Safety Data Sheet
according to Regulation (EC) No. 1907/2006

Basafilm Twin Gazon

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4.3 Indication of any immediate medical attention and special treatment needed
   Treatment                      : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media
   Suitable extinguishing media   : Water
   Unsuitable extinguishing       :
       media
       Foam
       Dry chemical
       Carbon dioxide (CO2)
       Sand

5.2 Special hazards arising from the substance or mixture
   Specific hazards during fire-   :
       fighting
       Can decompose at above 100 °C. Thermal decomposition
       products:
       Nitrogen monoxide, nitrogen dioxide, dinitrogenoxide, amm-
       onia
       Isobutyraldehyde

5.3 Advice for firefighters
   Special protective equipment   :
       for firefighters
       In the event of fire, wear self-contained breathing apparatus.
   Further information            :
       Fire residues and contaminated fire extinguishing water must
       be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
   Personal precautions            :
       Keep away from children.

6.2 Environmental precautions
   Environmental precautions       :
       Do not flush into surface water or sanitary sewer system.
       Retain and dispose of contaminated wash water.

6.3 Methods and material for containment and cleaning up
   Methods for cleaning up         :
       Use mechanical handling equipment.

6.4 Reference to other sections
   none

SECTION 7: Handling and storage
7.1 Precautions for safe handling

Advice on safe handling: Protect from contamination.
Keep away from direct sunlight.
Protect against heat.
Protect from moisture.

Advice on protection against fire and explosion: The product is not flammable. Keep away from sources of ignition - No smoking. Keep away from combustible materials. Keep away from heat. Risk of explosion if heated under confinement.

Hygiene measures: Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: When stored loose do not mix with other fertilizers. Store well away from other substances. Keep away from direct sunlight. Protect against heat. Protect from contamination. Protect from moisture.

Storage class (TRGS 510): 13

Dampness: Keep in a dry place.

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boric acid</td>
<td>TWA</td>
<td>2,6 mg/m3</td>
<td>DE TRGS 900</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>5,2 mg/m3</td>
<td>DE TRGS 900</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0,5 mg/m3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ammonium nitrate</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Specific effects</td>
<td>36 mg/m3</td>
</tr>
<tr>
<td>Remarks:</td>
<td>Exposure time: 1 d</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>Specific effects</td>
<td>5,12 mg/kg</td>
</tr>
<tr>
<td>Remarks:</td>
<td>Exposure time: 1 d</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>Specific effects</td>
<td>2,56 mg/kg</td>
</tr>
<tr>
<td>Substance name</td>
<td>Environmental Compartment</td>
<td>Value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---------------------------</td>
<td>----------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ammonium nitrate</td>
<td>Fresh water</td>
<td>0,45 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0,045 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ceiling Limit Value</td>
<td>4,5 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N,N''-(isobutylidene)diurea</td>
<td>Fresh water</td>
<td>0,5 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0,05 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>1,76 mg/l</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Marine sediment</th>
<th>0.176 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil</td>
<td>10.7 mg/l</td>
</tr>
<tr>
<td>Behaviour in waste water treatment plants</td>
<td>640 mg/l</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Personal protective equipment
Eye protection : In case of dust formation:
Tightly fitting safety goggles

Hand protection
Material : Gloves

Skin and body protection : No special protective equipment required.

Respiratory protection : Breathing apparatus only if aerosol or dust is formed.

Environmental exposure controls
General advice : Do not flush into surface water or sanitary sewer system.
Retain and dispose of contaminated wash water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
Appearance : granular

Colour : various

Odour : odourless

Odour Threshold : No data available

pH : ca. 6.2, Concentration: 100 g/l (20 ºC)

Melting point/range : No data available

Boiling point/boiling range : Not applicable

Flash point : Not relevant

Evaporation rate : Not applicable

Flammability (solid, gas) : The product is not flammable.

Upper explosion limit : Not applicable

Lower explosion limit : Not applicable

Vapour pressure : Not applicable
Relative vapour density : Not applicable
Bulk density : ca. 860 kg/m³
Solubility(ies)
Water solubility : soluble
Partition coefficient: n-octanol/water : Not applicable
Auto-ignition temperature : Not applicable
Decomposition temperature : > 130 °C
To avoid thermal decomposition, do not overheat.

Viscosity
Viscosity, dynamic : Not applicable
Viscosity, kinematic : Not applicable

Explosive properties : Not explosive
Oxidizing properties : Not applicable

9.2 Other information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
Stable under recommended storage conditions.

10.2 Chemical stability
No decomposition if stored and applied as directed.
Decomposes on heating.

10.3 Possibility of hazardous reactions
Hazardous reactions : Evolution of ammonia under influence of alkalies.

10.4 Conditions to avoid
Conditions to avoid : Keep away from heat and sources of ignition.

10.5 Incompatible materials
Materials to avoid : oxidizable substances
Strong acids and strong bases

10.6 Hazardous decomposition products
Hazardous decomposition products : Nitrogen monoxide, nitrogen dioxide, dinitrogenoxide, ammonia
SECTION 11: Toxicological information

11.1 Information on toxicological effects

**Acute toxicity**

**Product:**

- Acute oral toxicity: LD50 (Rat): > 2.000 mg/kg
- Acute dermal toxicity: Remarks: No data available
  Contains no hazardous ingredients according to GHS
  Health injuries are not known or expected under normal use.

**Components:**

- **ammonium nitrate:**
  - Acute oral toxicity: LD50 (Rat): > 2.950 mg/kg
    Method: OECD Test Guideline 401
  - Acute inhalation toxicity: > 88,8 mg/l
    Method: No information available.
  - Acute dermal toxicity: LD50 (Rat): > 5.000 mg/kg
    Method: OECD Test Guideline 402

- **Boric acid:**
  - Acute oral toxicity: LD50 (Mouse): 3.450 mg/kg
  - LD50 (Rat): 2.660 mg/kg
  - Acute inhalation toxicity: LC50 (Rat): 2 mg/l
  - Acute dermal toxicity: LD50 Dermal (Rabbit): > 2.000 mg/kg

- **N,N''-(isobutylidene)diurea:**
  - Acute oral toxicity: LD50 (Rat): > 10.000 mg/kg
    Remarks: Calculation method
  - Acute dermal toxicity: LD50 (Rat): > 2.000 mg/kg
    Method: OECD Test Guideline 402

**Skin corrosion/irritation**

**Product:**

- Species: Rabbit
- Method: OECD Test Guideline 404
- Result: non-irritant

**Components:**
ammonium nitrate:
Species: Rabbit
Method: OECD Test Guideline 404
Result: non-irritant

Boric acid:
Species: Rabbit
Result: No skin irritation

Serious eye damage/eye irritation

Product:
Species: Rabbit
Method: OECD Test Guideline 405
Result: non-irritant

Components:
ammonium nitrate:
Species: Rabbit
Method: OECD Test Guideline 405
Result: Irritant

Boric acid:
Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation

Respiratory or skin sensitisation

Product:
Result: non-sensitizing

Components:
ammonium nitrate:
Result: Does not cause skin sensitisation.

Boric acid:
Method: OECD Test Guideline 406
Result: non-sensitizing

N,N''-(isobutylidene)diurea:
Species: Mouse
Method: OECD Guideline 429
Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Product:
Genotoxicity in vitro : Remarks: No data available

Components:
ammonium nitrate:
Genotoxicity in vitro : Method: OECD Test Guideline 471
Result: negative

Boric acid:
Genotoxicity in vitro : Test Type: Mammalian cell gene mutation assay
Result: Mutagenicity tests revealed no genotoxic potential.
Remarks: In vitro tests did not show mutagenic effects

Germ cell mutagenicity- Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

N,N''-(isobutylidene)diurea:
Genotoxicity in vitro : Remarks: In vitro tests did not show mutagenic effects

Carcinogenicity
Product:
Remarks: Contains no ingredient listed as a carcinogen

Components:
ammonium nitrate:
Species: Rat
Remarks: Animal testing did not show any carcinogenic effects.

Boric acid:
Species: Rat
Application Route: Oral
Method: OECD Test Guideline 451
Remarks: Animal testing did not show any carcinogenic effects.

N,N''-(isobutylidene)diurea:
Remarks: Animal testing did not show any carcinogenic effects.

Reproductive toxicity
Product:
Effects on fertility : Remarks: No toxicity to reproduction

Effects on foetal development : Remarks: Contains no ingredient listed as toxic to reproduction

Components:
ammonium nitrate:
Effects on fertility: Species: Rat
Remarks: Animal testing did not show any effects on fertility.

Effects on foetal development: Species: Rat
Remarks: Did not show teratogenic effects in animal experiments.

Boric acid:
Effects on foetal development: Remarks: Animal ingestion studies in several species, at high doses, indicate that borates cause reproductive and developmental effects.

Reproductive toxicity - Assessment: May damage fertility. May damage the unborn child.

N,N''-(isobutylidene)diurea:
Effects on fertility: Remarks: Animal testing did not show any effects on fertility.

Effects on foetal development: Remarks: Did not show teratogenic effects in animal experiments.

STOT - single exposure

Product:
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

Components:
N,N''-(isobutylidene)diurea:
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Product:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Components:
N,N''-(isobutylidene)diurea:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:
ammonium nitrate:
Species: Rat
NOAEL: > 1,500 mg/kg
Application Route: Oral
Exposure time: 28 d

Species: Rat
NOAEL: = 256 mg/kg
Application Route: Oral
Exposure time: 52 w
Method: OECD Test Guideline 453

Species: Rat
NOAEL: >= 185 mg/kg
Application Route: by inhalation
Exposure time: 2 w
Method: Repeated Dose Inhalation Toxicity: 28-day or 14-day Study.

Further information

Product:
Remarks: Danger of methaemoglobin formation.
The product was not tested. The statement was derived from products of similar structure and composition.

SECTION 12: Ecological information

12.1 Toxicity

Product:
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Scenedesmus subspicatus): > 100 mg/l
Exposure time: 72 h
Method: DIN 38412

Toxicity to bacteria : EC0 (Pseudomonas putida): ca. 640 mg/l
Exposure time: 16 h
Test Type: activated sludge
Method: No data available

Components:
ammonium nitrate:
Toxicity to fish : LC50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia (water flea)): 490 mg/l
Exposure time: 48 h
LC50 : 490 mg/l

Toxicity to algae: EC50 (Selenastrum capricornutum (green algae)): 1.700 mg/l
Exposure time: 10 d

N,N''-(isobutylidene)diurea:

Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): > 1.000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna): ca. 500 mg/l
Exposure time: 48 h

Toxicity to algae: EC50 (Scenedesmus subspicatus): > 500 mg/l
Exposure time: 72 h
Method: DIN 38412

Toxicity to bacteria: EC0 (Pseudomonas putida): ca. 640 mg/l

12.2 Persistence and degradability

**Product:**

Biodegradability: Remarks: No data available

Physico-chemical removability: DOC reduction
ca. 85 %
Method: OECD 301E/92/69/EWG, C.4-B
Remarks: Readily eliminated from water

**Components:**

ammonium nitrate:

Biodegradability: Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

Boric acid:

Biodegradability: Remarks: Not applicable

N,N''-(isobutylidene)diurea:

Biodegradability: Remarks: The product is miscible in water and readily biodegradable in both water and soil. Accumulation is not expected.
12.3 Bioaccumulative potential

**Product:**
Bioaccumulation : Remarks: Bioaccumulation is unlikely.

**Components:**
ammonium nitrate:
Bioaccumulation : Remarks: Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water : log Pow: -3.1

**N,N''-(isobutyldiene)diurea:**
Bioaccumulation : Remarks: Bioaccumulation is unlikely.

12.4 Mobility in soil

**Product:**
Mobility : Remarks: No data available
Distribution among environmental compartments : Remarks: Moderately mobile in soils

**Components:**
Boric acid:
Mobility : Remarks: No data available

12.5 Results of PBT and vPvB assessment

**Product:**
Assessment : Remarks: Not applicable

**Components:**
Boric acid:
Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
Remarks: Not applicable

**N,N''-(isobutyldiene)diurea:**
Assessment : Remarks: Not applicable

12.6 Other adverse effects

**Product:**
Additional ecological information : Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.
There is a high probability that the product is acute not harm-
ful to aquatic organisms.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product: Check if agriculture use is possible. Contact manufacturer.

Contaminated packaging: Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

SECTION 14: Transport information

14.1 UN number
Not regulated as a dangerous good

14.2 UN proper shipping name
Not regulated as a dangerous good

14.3 Transport hazard class(es)
Not regulated as a dangerous good

14.4 Packing group
Not regulated as a dangerous good

14.5 Environmental hazards
Not regulated as a dangerous good

14.6 Special precautions for user
Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Remarks: Not relevant

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Water contaminating class (Germany): WGK 1 slightly water endangering

Other regulations: TRGS 511 'Ammonium nitrate'

15.2 Chemical Safety Assessment
A Chemical Safety Assessment is not required for this product.

SECTION 16: Other information

Full text of H-Statements

H272: May intensify fire; oxidizer.
Material Safety Data Sheet
generated according to Regulation (EC) No. 1907/2006

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H319 : Causes serious eye irritation.
H360FD : May damage fertility. May damage the unborn child.

Full text of other abbreviations
Eye Irrit. : Eye irritation
Ox. Sol. : Oxidizing solids
Repr. : Reproductive toxicity

(Q)SAR - (Quantitative) Structure Activity Relationship; ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; DIN - Standard of the German Institute for Standardisation; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50% of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TRGS - Technical Rule for Hazardous Substances; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemicals in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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