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

1.1. Product identifier

Product form : Substance
Physical state : Solid
Substance name : POTASSIUM 2-METHYL-2-BUTOXIDE, 96%
Product code : AKP647
Formula : C5H11KO
Synonyms : POTASSIUM t-AMYLATE
Chemical family : METAL ALCOHOLATE

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

GELEST INC.
Fritz-Klatte-Strasse 8
65933 Frankfurt
Germany
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestde.com - www.gelestde.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Flammable solids, Category 2 H228
Skin corrosion/irritation, Category 1B H314
Serious eye damage/eye irritation, Category 1 H318

Adverse physicochemical, human health and environmental effects
No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) : [Images of hazard pictograms]

Signal word (CLP) : Danger
Hazard statements (CLP) : H228 - Flammable solid.
H314 - Causes severe skin burns and eye damage.
POTASSIUM 2-METHYL-2-BUTOXIDE, 96%
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Precautionary statements (CLP):
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P240 - Ground/bond container and receiving equipment.
- P260 - Do not breathe dust.
- P264 - Wash hands thoroughly after handling.
- P310 - Immediately call a POISON CENTER or doctor/physician.

2.3. Other hazards
No additional information available.

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mono-constituent</td>
<td>POTASSIUM 2-METHYL-2-BUTOXIDE, 96%</td>
<td>41233-93-6</td>
<td>255-272-5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
</table>
| Potassium 2-methyl-2-butoxide | (CAS-No.) 41233-93-6  
(EC-No.) 255-272-5 | 95 - 100 | Flam. Sol. 2, H228  
Skin Corr. 1B, H314  
Eye Dam. 1, H318 |

Full text of H-statements: see section 16

3.2. Mixtures
Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Wash with plenty of water/… Get immediate medical advice/attention.

First-aid measures after eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion: Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Symptoms/effects: Causes severe skin burns and eye damage.

Symptoms/effects after inhalation: Inhalation will cause sneezing, irritation and burns.

Symptoms/effects after skin contact: Causes (severe) skin burns. If skin and air are dry, powder on skin may not cause irritation or burns. Worker will notice a slippery feeling on washing. However, if moisture is present, the powder can cause severe burns.

Symptoms/effects after eye contact: Causes serious eye damage.

Symptoms/effects after ingestion: May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Dry chemical. Dry soda ash. Dry sodium chloride.

Unsuitable extinguishing media: Do not use water or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Flammable solid. Irritating fumes and caustic vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Advice for firefighters

Firefighting instructions: Exercise caution when fighting any chemical fire. Protect against caustic dust, smoke and water.
POTASSIUM 2-METHYL-2-BUTOXIDE, 96%
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Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust. Wear pressure demand self-contained breathing apparatus with full facepiece and full protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures: Eliminate ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel
Protective equipment: Wear protective equipment as described in Section 8.
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures: Ventilate area.

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up: Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal. Use only non-sparking tools.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Additional hazards when processed: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Precautions for safe handling: Avoid contact with skin and eyes. Do not breathe dust. Avoid dust formation. Ground containers when handling powder. Provide local exhaust or general room ventilation to minimize exposure to dust. Use only non-sparking tools.
Hygiene measures: Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures: Use explosion-proof electrical equipment.
Storage conditions: Keep container tightly closed. Store locked up. Store under dry nitrogen or argon in sealed containers.
Storage area: Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Exposure controls

Appropriate engineering controls:
Provide local exhaust or general room ventilation.

Personal protective equipment:
Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:
Neoprene or nitrile rubber gloves

Eye protection:
Chemical goggles or face shield. Contact lenses should not be worn
Skin and body protection:
Wear suitable protective clothing. Long-sleeved fire-resistant lab uniform or coverall is recommended.

Respiratory protection:
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified caustic organic vapor (black cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>126.24 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>White to off-white.</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>No additional information available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>&gt; 160 °C decomposes</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>&gt; 200 °C decomposes</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Flammable solid.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>≈ 1 mm Hg @ 220°C</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>≈ 1</td>
</tr>
<tr>
<td>Solubility</td>
<td>Reacts with water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under nitrogen or argon in sealed containers.

10.3. Possibility of hazardous reactions

Material decomposes slowly in contact with moist air and rapidly in contact with water.

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials


10.6. Hazardous decomposition products

Caustic organic vapors. 2-Methyl-2-butothanol. Potassium hydroxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified
POTASSIUM 2-METHYL-2-BUTOXIDE, 96%
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Skin corrosion/irritation: Causes severe skin burns and eye damage.
Serious eye damage/irritation: Causes serious eye damage.
Respiratory or skin sensitisation: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
STOT-single exposure: Not classified
STOT-repeated exposure: Not classified
Aspiration hazard: Not classified
Symptoms/effects after inhalation: Inhalation will cause sneezing, irritation and burns.
Symptoms/effects after skin contact: Causes (severe) skin burns. If skin and air are dry, powder on skin may not cause irritation or burns. Worker will notice a slippery feeling on washing. However, if moisture is present, the powder can cause severe burns.
Symptoms/effects after eye contact: Causes serious eye damage.
Symptoms/effects after ingestion: May be harmful if swallowed.
Reason for classification: Expert judgment

SECTION 12: Ecological information
12.1. Toxicity
Ecology - general: Toxic to aquatic life.
Acute aquatic toxicity: Not classified
Chronic aquatic toxicity: Not classified

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment
No additional information available

12.6. Other adverse effects
Other adverse effects: This substance may be hazardous to the environment.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
Sewage disposal recommendations: Do not dispose of waste into sewer.
Product/Packaging disposal recommendations: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Additional information: Handle empty containers with care because residual vapours are flammable.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information
14.1. UN number
In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number
UN-No. (ADR): 2925
UN-No. (IMDG): 2925
UN-No. (IATA): 2925
UN-No. (ADN): 2925
UN-No. (RID): 2925

14.2. UN proper shipping name
Proper Shipping Name (ADR): FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S.
Proper Shipping Name (IMDG): FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S.
Proper Shipping Name (IATA): Flammable solid, corrosive, organic, n.o.s.
Proper Shipping Name (ADN): FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S.
# POTASSIUM 2-METHYL-2-BUTOXIDE, 96%

## Safety Data Sheet

<table>
<thead>
<tr>
<th>Proper Shipping Name (RID)</th>
<th>FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport document description (ADR)</td>
<td>UN 2925 FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S. (POTASSIUM 2-METHYL-2-BUTOXIDE), 4.1 (8), II, (E)</td>
</tr>
<tr>
<td>Transport document description (IMDG)</td>
<td>UN 2925 FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S. (POTASSIUM 2-METHYL-2-BUTOXIDE), 4.1 (8), II</td>
</tr>
<tr>
<td>Transport document description (IATA)</td>
<td>UN 2925 Flammable solid, corrosive, organic, n.o.s. (POTASSIUM 2-METHYL-2-BUTOXIDE), 4.1, II</td>
</tr>
<tr>
<td>Transport document description (ADN)</td>
<td>UN 2925 FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S. (POTASSIUM 2-METHYL-2-BUTOXIDE), 4.1 (8), II</td>
</tr>
<tr>
<td>Transport document description (RID)</td>
<td>UN 2925 FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S. (POTASSIUM 2-METHYL-2-BUTOXIDE), 4.1 (8), II</td>
</tr>
</tbody>
</table>

## 14.3. Transport hazard class(es)

### ADR
- Transport hazard class(es) (ADR): 4.1 (8)
- Danger labels (ADR): 4.1, 8

![ADR label]

### IMDG
- Transport hazard class(es) (IMDG): 4.1 (8)
- Danger labels (IMDG): 4.1, 8

![IMDG label]

### IATA
- Transport hazard class(es) (IATA): 4.1 (8)
- Hazard labels (IATA): 4.1, 8

![IATA label]

### ADN
- Transport hazard class(es) (ADN): 4.1 (8)
- Danger labels (ADN): 4.1, 8

![ADN label]

### RID
- Transport hazard class(es) (RID): 4.1 (8)
- Danger labels (RID): 4.1, 8

![RID label]
POTASSIUM 2-METHYL-2-BUTOXIDE, 96%
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14.4. Packing group
Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADR) : II
Packing group (RID) : II

14.5. Environmental hazards
Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport
Classification code (ADR) : FC1
Special provisions (ADR) : 274
Limited quantities (ADR) : 1kg
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P002, IBC06
Mixed packing provisions (ADR) : MP10
Portable tank and bulk container instructions (ADR) : T3
Portable tank and bulk container special provisions (ADR) : TP33
Tank code (ADR) : SGAN
Vehicle for tank carriage : AT
Transport category (ADR) : 2
Special provisions for carriage - Packages (ADR) : V11
Hazard identification number (Kemler No.) : 48
Orange plates : 48 2925

Tunnel restriction code (ADR) : E
EAC code : 1W

- Transport by sea
Special provisions (IMDG) : 274, 915
Limited quantities (IMDG) : 1 kg
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P002
IBC packing instructions (IMDG) : IBC06
IBC special provisions (IMDG) : B2
Tank instructions (IMDG) : T3
Tank special provisions (IMDG) : TP33
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-G
Stowage category (IMDG) : D
Stowage and handling (IMDG) : SW2
Properties and observations (IMDG) : Causes burns to skin, eyes and mucous membranes.

- Air transport
PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y441
PCA limited quantity max net quantity (IATA) : 5kg
PCA packing instructions (IATA) : 445
PCA max net quantity (IATA) : 15kg
CAO packing instructions (IATA) : 448
CAO max net quantity (IATA) : 50kg
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Special provisions (IATA): A3
ERG code (IATA): 3C

- **Inland waterway transport**
  Classification code (ADN): FC1
  Special provisions (ADN): 274
  Limited quantities (ADN): 1 kg
  Excepted quantities (ADN): E2
  Equipment required (ADN): PP, EP
  Number of blue cones/lights (ADN): 1

- **Rail transport**
  Classification code (RID): FC1
  Special provisions (RID): 274
  Limited quantities (RID): 1 kg
  Excepted quantities (RID): E2
  Packing instructions (RID): P002, IBC06
  Mixed packing provisions (RID): MP10
  Portable tank and bulk container instructions (RID): T3
  Portable tank and bulk container special provisions (RID): TP33
  Tank codes for RID tanks (RID): SGAN
  Transport category (RID): 2
  Special provisions for carriage – Packages (RID): W1
  Colis express (express parcels) (RID): CE10
  Hazard identification number (RID): 48

14.7. **Transport in bulk according to Annex II of Marpol and the IBC Code**
Not applicable

SECTION 15: **Regulatory information**

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

15.1.1. **EU-Regulations**
No REACH Annex XVII restrictions
POTASSIUM 2-METHYL-2-BUTOXIDE, 96% is not on the REACH Candidate List
POTASSIUM 2-METHYL-2-BUTOXIDE, 96% is not on the REACH Annex XIV List
POTASSIUM 2-METHYL-2-BUTOXIDE, 96% is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

15.1.2. **National regulations**

**Germany**
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

**Netherlands**
SZW-lijst van kankerverwekkende stoffen: The substance is not listed
SZW-lijst van mutagene stoffen: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling: The substance is not listed

**Denmark**
Danish National Regulations: Young people below the age of 18 years are not allowed to use the product
15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ND</td>
<td>Not Determined, No Data</td>
</tr>
<tr>
<td>NA</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>LD</td>
<td>Lethal Dose</td>
</tr>
<tr>
<td>LC</td>
<td>Lethal Concentration</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimates</td>
</tr>
<tr>
<td>H</td>
<td>hour</td>
</tr>
<tr>
<td>°C</td>
<td>°C unless otherwise stated</td>
</tr>
<tr>
<td>mmHg, torr</td>
<td>millimeters Hg, torr</td>
</tr>
<tr>
<td>PEL</td>
<td>permissible exposure level</td>
</tr>
<tr>
<td>TWA</td>
<td>time weighted average</td>
</tr>
<tr>
<td>TLV</td>
<td>threshold limit value</td>
</tr>
<tr>
<td>TG</td>
<td>Test Guideline</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety and Health</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>HMIS</td>
<td>Hazardous Material Information System</td>
</tr>
<tr>
<td>CAS No.</td>
<td>Chemical Abstract Service Registration Number</td>
</tr>
<tr>
<td>EC No.</td>
<td>European Commission Registration Number</td>
</tr>
<tr>
<td>EC Index No.</td>
<td>European Commission Index Number</td>
</tr>
<tr>
<td>OECD</td>
<td>The Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>GHS</td>
<td>The Globally Harmonized System of Classification and Labelling</td>
</tr>
<tr>
<td>APF</td>
<td>Assigned Protection Factor</td>
</tr>
</tbody>
</table>

Other information: Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation, Category 1</td>
</tr>
<tr>
<td>Flam. Sol. 2</td>
<td>Flammable solids, Category 2</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation, Category 1B</td>
</tr>
<tr>
<td>H228</td>
<td>Flammable solid</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II) - Custom

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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