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

### Product identifier

BEST-Aktiv A

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

**Use of the substance/mixture**

Activator

**Uses advised against**

none/none

### Details of the supplier of the safety data sheet

- **Company name:** Best Klebstoffe GmbH & Co. KG
- **Street:** Gewerbestraße 10-14
- **Place:** D-86981 Kinsau
- **Telephone:** +49 (0)8869-91384-0
- **Telefax:** +49 (0)8869-91384-15
- **e-mail:** info@bestklebstoffe.de
- **Internet:** www.bestklebstoffe.de
- **Responsible Department:** Dr. Timo Gans-Eichler
- **Street:** Raesfeldstr. 22
- **Place:** 48149 Münster
- **e-mail:** tge-consult@t-online.de
- **Internet:** www.tge-consult.de

### Emergency telephone:

+49 (0)8869-91384-0 (08:00 - 17:00)

## SECTION 2: Hazards identification

### Classification of the substance or mixture

**Indications of danger:** Highly flammable, Harmful, Irritant, Dangerous for the environment

**R-phrases:**

- Possible risk of impaired fertility.
- Highly flammable.
- Irritating to skin.

**Harmful:** danger of serious damage to health by prolonged exposure through inhalation.

**Toxic to aquatic organisms,** may cause long-term adverse effects in the aquatic environment.

**Harmful:** may cause lung damage if swallowed.

**Vapours may cause drowsiness and dizziness.**

### GHS classification

**Hazard categories:**

- Flammable liquid: Flam. Liq. 2
- Skin corrosion/irritation: Skin Irrit. 2
- Reproductive toxicity: Repr. 2
- Specific target organ toxicity - single exposure: STOT SE 3
- Specific target organ toxicity - repeated exposure: STOT RE 2
- Aspiration hazard: Asp. Tox. 1
- Hazardous to the aquatic environment: Aquatic Chronic 2

**Hazard Statements:**

- Highly flammable liquid and vapour.
- Causes skin irritation.
- Causes skin irritation.
- May cause drowsiness or dizziness.
- May cause drowsiness or dizziness.
- May cause damage to organs through prolonged or repeated exposure.
- May be fatal if swallowed and enters airways.
- Toxic to aquatic life with long lasting effects.
Hazardous components which must be listed on the label

**n-hexane**

**Hazard statements**
- H225: Highly flammable liquid and vapour.
- H315: Causes skin irritation.
- H361f: Suspected of damaging fertility.
- H336: May cause drowsiness or dizziness.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H304: May be fatal if swallowed and enters airways.
- H411: Toxic to aquatic life with long lasting effects.

**Precautionary statements**
- P233: Keep container tightly closed.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P331: Do NOT induce vomiting.
- P501: Dispose of contents/container to disposal according to official regulations.

**SECTION 3: Composition/information on ingredients**

**Mixtures**

**Hazardous components**

<table>
<thead>
<tr>
<th>EC No.</th>
<th>CAS No.</th>
<th>Classification</th>
<th>REACH No.</th>
<th>GHS classification</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>203-777-6</td>
<td>203-777-6</td>
<td>n-hexane</td>
<td></td>
<td></td>
<td>80 - &lt;100 %</td>
</tr>
<tr>
<td>601-037-00-0</td>
<td>601-037-00-0</td>
<td>Flam. Liq. 2, Repr. 2, Asp. Tox. 1, STOT RE 2, Skin Irrit. 2, STOT SE 3, Aquatic Chronic 2; H225 H361f *** H304 H373 ** H315 H336 H411</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Further Information*
- Full text of R- and H-phrases: see section 16.

**SECTION 4: First aid measures**

**Description of first aid measures**

**General information**
- In case of accident or if you feel unwell, seek medical advice immediately (show safety data sheet if possible).

**After inhalation**
- Provide fresh air. In case of irritation of the respiratory tract seek medical advice. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON
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Print date: 31.07.2015
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CENTER or doctor/physician.

After contact with skin
Remove contaminated clothing immediately and dispose off safely. After contact with skin, wash immediately with: Water and soap. Remove contaminated clothing immediately and dispose off safely. If skin irritation occurs: Get medical advice/attention.

After contact with eyes
Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion
Rinse mouth thoroughly with water. Immediately call a POISON CENTER or doctor/physician. Let water be swallowed in little sips (dilution effect). Do not induce vomiting.

Most important symptoms and effects, both acute and delayed

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

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media
dry extinguishing powder.
Carbon dioxide (CO2).

Extinguishing media which must not be used for safety reasons
High power water jet.

Special hazards arising from the substance or mixture
Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO2).

Advice for firefighters
Wear a self-contained breathing apparatus and chemical resistant suit.

Additional information
Use water spray/stream to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep away from sources of ignition - No smoking.
Provide adequate ventilation.
High slip hazard because of leaking or spilled product.
Wear personal protection equipment. (Refer to chapter 8.)

Environmental precautions
Cover drains. Prevent spreading over great surfaces (e.g. by damming or installing oil booms).
Do not empty into drains or the aquatic environment.
Dumping into the environment must be prevented.

Methods and material for containment and cleaning up
Use a water spray jet to knock down vapours/gases/mists.
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the assimilated material according to the section on waste disposal.
Clear contaminated area thoroughly.

Reference to other sections
See protective measures under point 7 and 8.

SECTION 7: Handling and storage
Precautions for safe handling

Advice on safe handling
Wear suitable protective clothing. (Refer to chapter 8.)

Advice on protection against fire and explosion
Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Flammable vapours can accumulate in steam space of closed systems. Vapours are heavier than air and will spread at floor level. Formation of potentially explosive mixtures with: Air.

Further information on handling
Conditions to avoid: Generation/formation of aerosols

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep locked up. Keep container tightly closed and in a well-ventilated place. Keep in a cool place. Protect from sunlight.

Advice on storage compatibility

Further information on storage conditions
Keep/Store only in original container. Store small quantities in appropriate dangerous substance cabinets. Suitable material for floor covering: Solvent-proof. The floor should be leak tight, jointless and not absorbent.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure limits (EH40)

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical name</th>
<th>ml/m³</th>
<th>mg/m³</th>
<th>F/ml</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>110-54-3</td>
<td>n-Hexane</td>
<td>20</td>
<td>72</td>
<td>-</td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>STEL (15 min)</td>
<td>WEL</td>
</tr>
</tbody>
</table>

Exposure controls

Occupational exposure controls
In case of open handling equipment with built-in suction must be used. Do not breathe gas/fumes/vapour/spray. Avoid contact during pregnancy/while nursing.

Protective and hygiene measures
Always close containers tightly after the removal of product. Do not eat, drink, smoke or sneeze at the workplace. Wash hands before breaks and at the end of work. Remove contaminated clothing immediately and dispose off safely. Wash contaminated clothing prior to re-use. Used working clothes should not be used outside the work area. Street clothing should be stored separately from work clothing. Do not put any product-impregnated cleaning rags into your trouser pockets. Protect skin by using skin protective cream.

Respiratory protection
Respiratory protection required in case of:
Generation/formation of aerosols exceeding critical value
Suitable respiratory protective equipment: gas filtering equipment (EN 141). Type: A

Hand protection
Pull-over gloves of rubber. DIN EN 374
Suitable material:
(penetration time (maximum wearing period): \( \geq 8 \) h):

- FKM (fluororubber). (0,4 mm)
- NBR (Nitrile rubber). (0,35 mm)

Before using check leak tightness / impermeability. In case of reutilization, clean gloves before taking off and store in well- aired place.

**Eye protection**

Suitable eye protection: Tightly sealed safety glasses. DIN EN 166

**Skin protection**

Protective apron.

**Environmental exposure controls**

This material and its container must be disposed of in a safe way.

### SECTION 9: Physical and chemical properties

#### Information on basic physical and chemical properties

- **Physical state:** liquid
- **Colour:** green
- **Odour:** characteristic

**Test method**

- **pH-Value:** n/a

#### Changes in the physical state

- **Melting point:** -95 °C
- **Boiling point:** 69 °C
- **Flash point:** -26 °C

- **Lower explosion limits:** 1,2 vol. %
- **Upper explosion limits:** 7,4 vol. %
- **Ignition temperature:** 240 °C

**Oxidizing properties**

- none/none

**Vapour pressure:** 160 hPa

(at 20 °C)

**Density (at 20 °C):** 0,66 g/cm³

**Water solubility:** practically insoluble

**Viscosity / kinematic:**

- (at 20 °C): 0,5 mm²/s

**Vapour density:** 2,79

### SECTION 10: Stability and reactivity

#### Reactivity

Reacts with: Oxidizing agents, strong.

#### Chemical stability

Stable under normal storage and handling conditions.

#### Possibility of hazardous reactions

Reacts with: Oxidizing agents, strong.

#### Conditions to avoid

In case of warming: Ignition hazard. Vapours can travel considerable distances to a source of ignition where they can ignite, flash back, or explode. It is possible that in the head space of sealed containers, especially in the case of thermal development, vapours of solvent cleaners may accumulate. Flames
and sources of ignition must be kept well away.

### Incompatible materials
Materials to avoid: Oxidizing agents, strong.

### Hazardous decomposition products
Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO2).

### SECTION 11: Toxicological information

#### Information on toxicological effects

**Toxicokinetics, metabolism and distribution**
No information available.

**Acute toxicity**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical name</th>
<th>Exposure routes</th>
<th>Method</th>
<th>Dose</th>
<th>Species</th>
<th>h</th>
</tr>
</thead>
<tbody>
<tr>
<td>110-54-3</td>
<td>n-hexane</td>
<td>Acute oral toxicity</td>
<td>LD50</td>
<td>25000 mg/kg</td>
<td>Rat.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute dermal toxicity</td>
<td>LD50</td>
<td>2000 mg/kg</td>
<td>Rabbit.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute inhalation toxicity</td>
<td>LC50</td>
<td>171,6 mg/l</td>
<td>Rat.</td>
<td>4</td>
</tr>
</tbody>
</table>

**Specific effects in experiment on an animal**
No information available.

**Irritation and corrosivity**
Irritant effect on the eye: irritant. slightly irritant but not relevant for classification.
Irritant effect on the skin: no danger of sensitization.

**Sensitizing effects**
no danger of sensitization.

**Severe effects after repeated or prolonged exposure**
Subchronic inhalative toxicity: NOAEC = 500 ppm (90d OECD 913)

**Carcinogenic/mutagenic/toxic effects for reproduction**
Developmental toxicity/teratogenicity: LOAEC = 200 ppm
No experimental indications of mutagenicity in-vitro exist.

### SECTION 12: Ecological information

**Toxicity**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical name</th>
<th>Method</th>
<th>Dose</th>
<th>Species</th>
<th>h</th>
</tr>
</thead>
<tbody>
<tr>
<td>110-54-3</td>
<td>n-hexane</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>2,5 mg/l</td>
<td>Pimephales promelas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50</td>
<td>2,41 mg/l</td>
<td>Daphnia magna</td>
</tr>
</tbody>
</table>

**Persistence and degradability**
Product is biodegradable.

**Bioaccumulative potential**
BCF = 501.187 (QSAR)
Partition coefficient n-octanol/water

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>110-54-3</td>
<td>n-hexane</td>
<td>4,11</td>
</tr>
</tbody>
</table>

Mobility in soil
No information available.

Results of PBT and vPvB assessment
No information available.

Further information
Do not allow uncontrolled leakage of product into the environment.

SECTION 13: Disposal considerations

Waste treatment methods

Advice on disposal
Waste disposal according to official state regulations. Consult the local waste disposal expert about waste disposal.

Waste disposal number of waste from residues/unused products
070704 | WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors Classified as hazardous waste.

Waste disposal number of used product
070704 | WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors Classified as hazardous waste.

Waste disposal number of contaminated packaging
150110 | WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances Classified as hazardous waste.

Contaminated packaging
Cleaned containers may be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)

UN number: 1208
UN proper shipping name: HEXANES
Transport hazard class(es): 3
Packing group: II
Hazard group: 3

Classification code: F1
Limited quantity: 1 L
Transport category: 2
Hazard-no.: 33
Tunnel restriction code: D/E
Other applicable information (land transport)
Special provisions: 144 601
Excepted quantity: E2
Transport category: 2
Special provisions: 274 601 640C
Special provisions: 601

Inland waterways transport
UN number: 1208
UN proper shipping name: HEXANES
Transport hazard class(es): 3
Packing group: II
Hazard label: 3

Classification code: F1
Limited quantity: 1 L

Other applicable information (inland waterways transport)
Special provisions: 144 601
Excepted quantity: E2
Special provisions: 274 601 640D
Special provisions: 601

Marine transport
UN number: 1208
UN proper shipping name: HEXANES
Transport hazard class(es): 3
Packing group: II
Hazard label: 3

Special Provisions: -
Limited quantity: 1 L
EmS: F-E, S-D

Other applicable information (marine transport)
Special provisions: 144, 223
Excepted quantity: E1
Special provisions: 274
Excepted quantity: E2
Special provisions: -

Air transport
UN/ID number: 1208
UN proper shipping name: HEXANES
Transport hazard class(es): 3
Packing group: II
Hazard label: 3
Limited quantity Passenger: 1 L
IATA-packing instructions - Passenger: 353
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 364
IATA-max. quantity - Cargo: 60 L

Other applicable information (air transport)
Excepted quantity: E1
Passenger-LQ: Y309
Special provisions: A3 A58
Excepted quantity: E2
Passenger-LQ: Y305
Passenger-LQ: Y341

SECTION 15: Regulatory information
Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information
1999/13/EC (VOC): 100% (Data concerning the Directive 1999/13/EC on the limitation of emissions of volatile organic compounds (VOC-RL))

Additional information

National regulatory information
Water contaminating class (D): 2 - water contaminating

SECTION 16: Other information
Changes
05.12.2011 Rev. 1.0 Initial release
22.04.2013 Rev. 2.0
31.07.2015 Rev. 3.0

Full text of R-phrases referred to under sections 2 and 3
11 Highly flammable.
38 Irritating to skin.
48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
51 Toxic to aquatic organisms.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
53 May cause long-term adverse effects in the aquatic environment.
62 Possible risk of impaired fertility.
65 Harmful: may cause lung damage if swallowed.
67 Vapours may cause drowsiness and dizziness.

Full text of H-Statements referred to under sections 2 and 3
H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor’s safety data sheet.)