

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

- **Product identifier**
- **Trade name:** IBOLA R 202 2K- PU synthetic turf adhesive Comp.A
- *Application of the substance / the preparation* Adhesives
- **Details of the supplier of the safety data sheet**
- **Manufacturer:**
STAUF Klebstoffwerk GmbH
Oberhausener Strasse 1
57234 Wilnsdorf, Germany
+49-(0)2739-301-0
+49-(0)2739-301-200
- **Emergency telephone number:** STAUF, Wilnsdorf, +49-2739-301-0

2 Hazards identification

- *Information concerning particular hazards for human and environment:*
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- *Classification system:*
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **Labelling according to EU guidelines:**
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).
- **Other hazards**
- **Results of PBT and vPvB assessment**
- *PBT:* Not applicable.
- *vPvB:* Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 7727-43-7	barium sulphate, natural	10-25%
EINECS: 231-784-4	substance with a Community workplace exposure limit	

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- *Most important symptoms and effects, both acute and delayed*
No further relevant information available.
- *Indication of any immediate medical attention and special treatment needed*
No further relevant information available.

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5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Use only in well ventilated areas.
Avoid contact with the eyes.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
· *Requirements to be met by storerooms and receptacles:* No special requirements.
· *Information about storage in one common storage facility:* Not required.
· *Further information about storage conditions:* None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:

7727-43-7 barium sulphate, natural

WEL	Long-term value: 10* 4** mg/m ³ *inhalable dust **respirable dust
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· *Additional information:* The lists valid during the making were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
- *General protective and hygienic measures:*
The usual precautionary measures are to be adhered to when handling chemicals.
Wash hands before breaks and at the end of work.
- *Respiratory protection:* Not necessary if room is well-ventilated.
- *Protection of hands:*
- *Material of gloves* Butyl rubber, BR
- *Eye protection:* Goggles recommended during refilling

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· *Body protection:* Protective work clothing

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9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· *Appearance:*

· *Form:* Fluid
 · *Colour:* Green
 · *Odour:* Characteristic
 · *Odour threshold:* Not determined.

· **pH-value:** Not determined.

· Change in condition

· *Melting point/Melting range:* Undetermined.
 · *Boiling point/Boiling range:* 301°C

· **Flash point:** 127°C

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 420°C

· *Decomposition temperature:* Not determined.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· Explosion limits:

· *Lower:* Not determined.
 · *Upper:* Not determined.

· **Vapour pressure at 20°C:** 1 hPa

· **Density at 20°C:** 1.7 g/cm³

· *Relative density* Not determined.

· *Vapour density* Not determined.

· *Evaporation rate* Not determined.

· Solubility in / Miscibility with

· *water:* Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· Viscosity:

· *Dynamic at 20°C:* 180000 mPas
 · *Kinematic:* Not determined.
 · *Organic solvents:* 0.0 %

· *Solids content:* 69.7 %

· **Other information** No further relevant information available.

10 Stability and reactivity

· Reactivity

· Chemical stability

· *Thermal decomposition / conditions to be avoided:*

No decomposition if used according to specifications.

· **Possibility of hazardous reactions** No dangerous reactions known.

· **Conditions to avoid** No further relevant information available.

· **Incompatible materials:** No further relevant information available.

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· **Hazardous decomposition products:** No dangerous decomposition products known.

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11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

- *Primary irritant effect:*
- *on the skin:* No irritant effect.
- *on the eye:* No irritating effect.
- *Sensitization:* No sensitizing effects known.

· **Additional toxicological information:**

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

12 Ecological information

· **Toxicity**

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

Smaller quantities can be disposed of with household waste.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **ADR, ADN, IMDG, IATA** Void

· **UN proper shipping name**

· **ADR, ADN, IMDG, IATA** Void

· **Transport hazard class(es)**

· **ADR, ADN, IMDG, IATA**

· *Class* Void

· **Packing group**

· **ADR, IMDG, IATA** Void

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- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user:** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

15 Regulatory information

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.




- **Department issuing MSDS:** Technical Department
- **Contact:** Dr. Frank Gahlmann +49-(0)2739-301165 gahlmann@stauf.de

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

- **Product identifier**
- **Trade name:** IBOLA R 202 Hardener 10
- **CAS Number:**
9016-87-9
- **Relevant identified uses of the substance or mixture and uses advised against**
- *Application of the substance / the preparation* Adhesives
- **Details of the supplier of the safety data sheet**
- **Manufacturer:**
STAUF Klebstoffwerk GmbH
Oberhausener Strasse 1
57234 Wilnsdorf
Germany
+49-(0)2739-301-0
+49-(0)2739-301-200
- **Emergency telephone number:** STAUF, Wilnsdorf, +49-2739-301-0

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
-  Xn; Harmful
R20-40-48/20: Harmful by inhalation. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation.
-  Xn; Sensitising
R42/43: May cause sensitisation by inhalation and skin contact.
-  Xi; Irritant
R36/37/38: Irritating to eyes, respiratory system and skin.
- *Information concerning particular hazards for human and environment:* Not applicable.

· **Label elements**

· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· *Code letter and hazard designation of product:*



Carc. Cat. 3
Xn Harmful

· *Risk phrases:*

- 20 Harmful by inhalation.
- 36/37/38 Irritating to eyes, respiratory system and skin.
- 40 Limited evidence of a carcinogenic effect.
- 42/43 May cause sensitisation by inhalation and skin contact.
- 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

· *Safety phrases:*

- 1/2 Keep locked up and out of the reach of children.
- 23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
- 24 Avoid contact with skin.
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 36/37 Wear suitable protective clothing and gloves.

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- 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- 60 This material and its container must be disposed of as hazardous waste.
- *Special labelling of certain preparations:*
Contains isocyanates. See information supplied by the manufacturer
 - **Other hazards**
 - **Results of PBT and vPvB assessment**
 - *PBT:* Not applicable.
 - *vPvB:* Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
9016-87-9 diphenylmethanediisocyanate, isomeres and homologues
- **Identification number(s)** not applicable

4 First aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
If skin irritation continues, consult a doctor.
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **Information for doctor:**
 - *Most important symptoms and effects, both acute and delayed* Breathing difficulty
 - *Hazards* Danger of impaired breathing.
 - *Indication of any immediate medical attention and special treatment needed*
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray.
Foam
Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide (CO)
Nitrogen oxides (NO_x)
(Traces)
Hydrogen cyanide (HCN)
- **Advice for firefighters**
- **Protective equipment:**
Wear fully protective suit.

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Wear self-contained respiratory protective device.

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6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Use only in well ventilated areas.

· **Information about fire - and explosion protection:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· *Requirements to be met by storerooms and receptacles:* No special requirements.

· *Information about storage in one common storage facility:* Not required.

· *Further information about storage conditions:*

Protect from frost.

Store in dry conditions.

Keep container tightly sealed.

· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

WEL Short-term value: 0.07 mg/m³

Long-term value: 0.02 mg/m³

Sen; as -NCO

· *Additional information:* The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· *General protective and hygienic measures:*

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

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Trade name: IBOLA R 202 Hardener 10

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- **Respiratory protection:**
Not necessary if room is well-ventilated.
Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**
- **Material of gloves**
Butyl rubber, BR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Eye protection:**
Face protection



Tightly sealed goggles

- **Body protection:** Protective work clothing

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Dark brown
· Odour:	Weak, characteristic
· Odour threshold:	Not determined.

· pH-value:

Not determined.

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	190°C
Setting temperature / range:	0°C

· Flash point:

201°C

· Ignition temperature:

400°C

· Decomposition temperature:

Not determined.

· Self-igniting:

Not determined.

· Danger of explosion:

Product does not present an explosion hazard.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure at 20°C:

11 hPa

· Density at 20°C:

1.22 g/cm³

· Relative density

Not determined.

· Vapour density

Not determined.

· Evaporation rate

Not determined.

· Solubility in / Miscibility with

water: Not miscible or difficult to mix.

· Segregation coefficient (n-octanol/water):

Not determined.

· Viscosity:

Dynamic at 20°C:	90 mPas
Kinematic:	Not determined.
Organic solvents:	0.0 %

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- Solids content:* 100.0 %
 · **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- *Thermal decomposition / conditions to be avoided:*
No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
Exothermic reaction with amines and alcohols; reacts with water forming CO₂; in closed containers, risk of bursting owing to increase of pressure.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· *LD/LC50 values relevant for classification:*

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

Oral	LD50	> 2000 mg/kg (Ratte)
Inhalative	LC50/4 h	490 mg/l (Ratte) (als Aerosol, Exposition)

- *Primary irritant effect:*
- *on the skin:* Irritant to skin and mucous membranes.
- *on the eye:* Irritating effect.
- *Sensitization:*
Sensitization possible through inhalation.
Sensitization possible through skin contact.
- *CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)*
Carc. Cat. 3

12 Ecological information

- **Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to EU guidelines:**
- *Code letter and hazard designation of product:*
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- *Hazard-determining components of labelling:* Diphenylmethandiisocyanat
- *Risk phrases:*
Limited evidence of a carcinogenic effect.
Harmful by inhalation.
Irritating to eyes, respiratory system and skin.
May cause sensitisation by inhalation and skin contact.
Danger of serious damage to health by prolonged exposure.
- *Safety phrases:*
Keep out of the reach of children.
Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
Avoid contact with skin.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable gloves.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
This material and its container must be disposed of as hazardous waste.
Keep locked up.

- **National regulations:**
- *Technical instructions (air):*

Class	Share in %
I	50-100

- *Waterhazard class:* Water hazard class 1 (Self-assessment): slightly hazardous for water.

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- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Technical Department
- **Contact:** Dr. Frank Gahlmann +49-(0)2739-301165 gahlmann@stauf.de

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