

# NEW GENERATION OF WATERPROOFING & PROTECTIVE COATING SYSTEMS



# Hightech surface protection

## Pure polyurea PC ISO AMINE / WP



### General Information

PC® ISO /AMINE® WP is a broadly used polyurea spray elastomer system. It consists of the two components PC AMINE® WP and PC® ISO WP. It offers excellent surfaces and good overall physical properties. The WP series is a pure polyurea

formulation designed for water proofing membranes and light traffic areas. It combines advantages of seamless films with very long life cycles and high durability.

Properties	Unit	Typical values	Sales specifications
<b>Chemical and Physical Data of PC AMINE® WP / PC® ISO WP</b>			
Appearance Amine component Isocyanat resin		clear to yellowish liquid yellowish to brownish liquid	
Density at 25°C Amine component Isocyanat resin	g/cm <sup>3</sup> (lb/ft <sup>3</sup> ) g/cm <sup>3</sup> (lb/ft <sup>3</sup> )	1.00 (62.4) 1.12 (69.9)	
Primary amine value / NCO content	mg KOH / g wt%	210 16	min. 202 15.4 – 16.4
Viscosity Amine component Isocyanat resin	mPa·s mPa·s	< 1500 1000	
Water content of the Amine	wt %	0.05	max. 0.25
Boiling point Amine component Isocyanat resin	°C (°F) °C (°F)	> 200 (> 392) > 200 (> 392)	
reaction time	s	8	
<b>Processing parameters</b>			
Block Temperature	°C (°F)	70 - 80 (158 - 176)	
Hose Temperatures (A and B)	°C (°F)	70 - 80 (158 - 176)	
Constant pressure	bar	120	
<b>Physical Properties of the reaction product / sprayed surface</b>			
cure time, walkable	min	2	
Density at 25°C (cured)	g/cm <sup>3</sup> (lb/ft <sup>3</sup> )	1.02 (63.7)	
Elongation ASTM D412	DIN 53455	333	
Tensile strength ASTM D412	DIN 53504	22	
Tear strength ASTM D624C		38	
Shore-A/D ASTM D 2240	DIN EN 53505	94/43	
Abrasion (Taber H 18)	DIN 53516	200 (approx.)	



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# Hightech surface protection

## Pure polyurea PC ISO AMINE / WP



### Application

PC<sup>®</sup> ISO /AMINE<sup>®</sup> WP offers ease in processing as well as excellent physical properties.

Usual applications are:

- light traffic areas
- roofing, foundations
- water tanks, secondary containments
- sewage systems, pipers

### Processing

#### Surface preparation:

Before spraying the surface should be blast cleaned to achieve a smooth appearance. Also the surfaces should be free from any contaminations such as oil or dust and should be dry.

#### Processing parameters:

The re-coat window ranges from 20 seconds to a few hours depending on the application. The post cure takes at 20°C 24 hours. The temperature of the sprayed object can be theoretically between 0 to 50°C, with reaction times significantly longer at low temperatures in the range of 0 to 15°C. Observe dew point.

#### Spraying machine

A high pressure spray proportioning machine for plural heated components should be used for this material. Please contact us for details.

#### Necessary amount

For a sprayed area of 1 m<sup>2</sup> with 2 mm coating thickness approx. one litre of each component is needed.

#### Note:

The coverage figure is theoretical – due to wastage factors and the variety and nature of substrates, practical coverage figures may vary.

### Coating

Should be applied by specialized applicators. Do not dilute PC<sup>®</sup> ISO /AMINE<sup>®</sup> WP under any circumstances. Use appropriate chemical for flushing of equipment. If material is stored for a period of time thoroughly mix the amine component with drum mixer until a homogenous mixture and color is obtained.

### Safety and Handling

Classification: PC<sup>®</sup> ISO WP

Hazard

Pictograms



Danger

Resp. Sens. 1 (H334)

Carc. 2 (H351)

STOT RE 2 (H373)

Acute Tox. 4 inhalation (H332)

Skin Irrit. 2 (H315)

Eye Irrit. 2 (H319)

Skin Sens. 1 (H317)

STOT SE 3 (H335)

Classification: PC AMINE<sup>®</sup> WP

Hazard

Pictograms



Danger

STOT 2 (H373)

Skin Corr. 1B (H314)

Aquatic Chronic 2 (H411)

Acute Tox. 4 - oral (H302)

### Safety handling

Avoid contact with eyes and skin. Wear suitable protective clothing, gloves and eye/face protection at all times. Ensure adequate ventilation and avoid inhalation of vapour and aerosol. Use respirator. PC<sup>®</sup> ISO WP may cause sensitisation by inhalation and skin contact. In case of eye contact, first aid must be administered immediately. The eyes should be held open while flushing with a continuous low-pressure stream of water for at least 15 minutes. Seek medical advice immediately. If swallowed, seek medical attention immediately – do not induce vomiting. The use of barrier creams provides additional skin protection.



Material safety data sheets with all relevant information of PC AMINE<sup>®</sup> WP and PC<sup>®</sup> ISO WP are available on request.

### Decomposition:



Cured PC<sup>®</sup> ISO /AMINE<sup>®</sup> WP polyurea can be disposed without restriction. The uncured isocyanate and resin portions should be disposed according to local environmental laws and ordinances.

### Transport and Packaging

PC AMINE<sup>®</sup> WP is classified in the terms of transport regulation as follows:

Land: ADR/RID-GGVSE: 8, II  
Sea: IMDG/GGVSee: 8, II, UN 2735  
Air: ICAO-TI/IATA-DGR: 8, II

PC<sup>®</sup> ISO WP is not classified as dangerous good in the terms of transport regulations.

### Packaging

Amine component	Iso component
Pails 25 kg (55 lbs)	Pails 27.5 kg (60.6 lbs)
Drums 200 kg (441 lbs)	Drums 222 kg (489.5 lbs)
IBC 1,000 kg (2205 lbs)	IBCs 1,110 kg (2,447 lbs)

### Storage

Keep away from air, protect against light, heat and humidity. Shelf life in originally closed and sealed drums 12 months under proper storing conditions for PC AMINE<sup>®</sup> WP and 6 months for PC<sup>®</sup> ISO WP. Changes in color have no negative effect on reactivity and physical properties of the elastomer.



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# Hightech surface protection

## Pure polyurea PC ISO AMINE / CRP



### General Information

PC® ISO / PC AMINE® CRP is a polyurea spray elastomer system. It consists of the two components PC® ISO CRP and PC AMINE® CRP. It offers very good chemical resistant for chemical containment. Additionally the system offers lower water absorption compared to standard polyurea

systems or polyurethane systems. The CRP series is a pure polyurea formulation without additives or solvents. It combines advantages of seamless films with very long life cycles and high durability.

Properties	Unit	Typical values	Sales specifications
<b>Chemical and Physical Data of PC® ISO CRP / PC AMINE® CRP</b>			
Appearance Amine component Isocyanat resin		clear to yellowish liquid yellowish liquid	
Density at 25°C Amine component Isocyanat resin	g/cm <sup>3</sup> (lb/ft <sup>3</sup> ) g/cm <sup>3</sup> (lb/ft <sup>3</sup> )	1.00 (62.4) 1.15 (71.8)	
Primary amine value / NCO content	mg KOH / g wt%	230 15.7	min. 215 15.5 ± 0.5
Viscosity at 23 °C Amine component Isocyanat resin	mPa·s mPa·s	~ 1500 5000	
Water content of the Amine	wt %	0.05	max. 0.2
Boiling point Amine component Isocyanat resin	° C (° F) ° C (° F)	> 200 (> 392) > 200 (> 392)	
Reaction time	s	8 - 16	
<b>Processing parameters</b>			
Block Temperature	°C (°F)	75 - 85 (167 - 185)	
Hose Temperatures (A and B)	°C (°F)	750 - 85 (167 - 185)	
Constant pressure	bar	140 - 170	
<b>Physical Properties of the reaction product / sprayed surface *)</b>			
Density at 25°C (cured)	g/cm <sup>3</sup> (lb/ft <sup>3</sup> )	1.05 (65.6)	> 1.00 (> 62.4)
Elongation ASTM D412	%	300	> 280
Tensile strength ASTM D412	N/mm <sup>2</sup>	24	> 20
Tear strength DIN 53507		18 kN/m	
Shore-D ASTM D 2240		50	

\*) The above mentioned sales specifications can only be achieved by proper processing.



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# Hightech surface protection

## Pure polyurea PC ISO AMINE / CRP



### Application

PC® ISO / PC AMINE® CRP offers excellent processing and good physical properties. It forms smooth surfaces with less overspray. Usual applications are:

- Tanks
- chemical containments

### Processing

#### Surface preparation:

Before spraying the surface should be blast cleaned to achieve a smooth appearance. Also the surfaces should be free from any contaminations such as oil or dust and should be dry.

#### Processing parameters:

The isocyanate component should be pre-heated in the drum to approx. 45 °C. The re-coat window ranges from 20 seconds to a few hours depending on the application. The post cure takes at 20°C 24 hours. The temperature of the sprayed object can be theoretically between 0 to 50°C, with reaction times significantly longer at low temperatures in the range of 0 to 15°C. Observe dew point and humidity.

#### Spraying machine

A high pressure spray proportioning machine for plural heated components should be used for this material. Please contact us for details.

#### Necessary amount

For a sprayed area of 1 m<sup>2</sup> with 2 mm coating thickness approx. one litre of each component is needed.

#### Note:

The coverage figure is theoretical – due to wastage factors and the variety and nature of substrates, practical coverage figures may vary.

### Coating

Should be applied by specialized applicators. Do not dilute PC® ISO / PC AMINE® CRP under any circumstances. Use appropriate chemical for flushing of equipment. If material is stored for a period of time thoroughly mix AMINE with drum mixer until a homogenous mixture and color is obtained.

### Safety and Handling

GHS Classification of PC® ISO CRP

Hazard

Pictograms



Danger

Resp. Sens. 1 (H334)

Carc. 2 (H351)

STOT RE 2 (H373)

Acute Tox. 4 – inhalation (H332)

Skin Irrit. 2 (H315)

Eye Irrit. 2 (H319)

Skin Sens. 1 (317)

STOT SE 3 (H335)

GHS Classification of PC AMINE® CRP

Hazard

Pictograms



Danger

STOT RE 2 (H373)

Skin Corr. 1B (H314)

Acute Tox. 4 (H302)

Aquatic Chronic 2 (H411)

#### Safety handling

Avoid contact with eyes and skin. Wear suitable protective clothing, gloves and eye/face protection at all times. Ensure adequate ventilation and avoid inhalation of vapour and aerosol. Use respirator. PC® ISO CRP may cause sensitisation by inhalation and skin contact. In case of eye contact, first aid must be administered immediately. The eyes should be held open while flushing with a continuous low-pressure stream of water for at least 15 minutes. Seek medical advice immediately. If swallowed, seek medical attention immediately – do not induce vomiting. The use of barrier creams provides additional skin protection.



Material safety data sheets with all relevant information of PC AMINE® CRP and PC® ISO CRP are available on request.

#### Decomposition:



The cured Polyurea can be disposed without restriction. The un-cured isocyanate and amine resin portions should be disposed according to local environmental laws and ordinances.

#### Transport and Packaging

PC AMINE® CRP is classified in the terms of transport regulation as follows:

Land: ADR/RID-GGVSE: 8, II

Sea: IMDG/GGVSee: 8, II, UN 2735

Air: ICAO-TI/IATA-DGR: 8, II

PC® ISO CRP is not classified as dangerous good in the terms of transport regulations.

#### Packaging

Amine component

Pails 20 kg (44 lbs)

Drums 200 kg (441 lbs)

IBC 1,000 kg (2205 lbs)

Iso component

Pails 28.7 kg (63.3 lbs)

Drums 230 kg (507 lbs)

IBCs 1,150 kg (2,535 lbs)

#### Storage

Keep away from air, protect against light, heat and humidity. Shelf life in originally closed and sealed drums 12 months under proper storing conditions for PC AMINE® CRP and 6 months for PC® ISO CRP. Changes in color have no negative effect on reactivity and physical properties of the elastomer.



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# Hightech surface protection

## Pure polyurea PC ISO AMINE / FL



### General Information

PC® ISO / AMINE® FL is a broadly used polyurea spray elastomer system. It consists of the two components PC AMINE® FL and PC® ISO FL. By replacing standard formulations by PC® ISO / AMINE® FL durable surfaces with strong physical properties can be achieved. The

FL series is a pure polyurea designed for flooring, and mechanically impacted surfaces with medium to high traffic. It offers long-term durability and flexibility and combines strong mechanical resistance with excellent crack bridging and waterproofing properties.

Properties	Unit	Typical values	Sales specifications
<b>Chemical and Physical Data of PC AMINE® FL / PC® ISO FL</b>			
Appearance Amine component Isocyanat resin		clear to yellowish liquid yellowish to brownish liquid	
Density at 25°C Amine component Isocyanat resin	g/cm³ (lb/ft³) g/cm³ (lb/ft³)	1.00 (62.4) 1.12 (69.9)	
Primary amine value / NCO content	mg KOH / g wt%	210 16	min. 202 15.4 – 16.4
Viscosity Amine component Isocyanat resin	mPa·s mPa·s	< 1500 1000	
Water content of the Amine	wt %	0.05	max. 0.25
Boiling point Amine component Isocyanat resin	°C (°F) °C (°F)	> 200 (> 392) > 200 (> 392)	
reaction time	s	10	
<b>Processing parameters</b>			
Block Temperature	°C (°F)	70 - 80 (158 - 176)	
Hose Temperatures (A and B)	°C (°F)	70 - 80 (158 - 176)	
Constant pressure	bar	120	
<b>Physical Properties of the reaction product / sprayed surface</b>			
cure time, walkable	min	2	
Density at 25°C (cured)	g/cm³ (lb/ft³)	1.02 (63.7)	
Elongation ASTM D412	DIN 53455	330	
Tensile strength ASTM D412	DIN 53504	20	
Tear strength ASTM D624C		38	
Shore-A/D ASTM D 2240	DIN EN 53505	97/54	
Abrasion (Taber H 18)	DIN 53516	170 (approx.)	



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# Hightech surface protection

## Pure polyurea PC ISO AMINE / FL



### Application

PC® ISO / AMINE® FL offers easy processing as well as excellent mechanical resistance. Internal adhesion promoters enable excellent adhesion on many substrates, such as concrete, ceramics, glass, aluminium, etc. Specify the substrate when ordering to get the best adjusted product for your surface.

Usual applications are:

- industrial flooring, ramps
- parking decks, ship decks
- container
- general purpose

### Processing

#### Surface preparation:

Before spraying the surface should be blast cleaned to achieve a smooth appearance. Also the surfaces should be free from any contaminations such as oil or dust and should be dry.

#### Processing parameters:

The re-coat window ranges from 20 seconds to a few hours depending on the application. The post cure takes at 20°C 24 hours. The temperature of the sprayed object can be theoretically between 0 to 50°C, with reaction times significantly longer at low temperatures in the range of 0 to 15°C. Observe dew point.

#### Spraying machine

A high pressure spray proportioning machine for plural heated components should be used for this material. Please contact us for details.

#### Necessary amount

For a sprayed area of 1 m<sup>2</sup> with 2 mm coating thickness approx. one litre of each component is needed.

#### Note:

The coverage figure is theoretical – due to wastage factors and the variety and nature of substrates, practical coverage figures may vary.

### Coating

Should be applied by specialized applicators. Do not dilute PC® ISO / AMINE® FL under any circumstances. Use appropriate chemical for flushing of equipment. If material is stored for a period of time thoroughly mix AMINE with drum mixer until a homogenous mixture and color is obtained.

### Safety and Handling

Classification: PC® ISO FL

Hazard

Pictograms



Danger

Resp. Sens. 1 (H334)

Carc. 2 (H351)

STOT RE 2 (H373)

Acute Tox. 4 - inhalation (H332)

Skin Irrit. 2 (H315)

Eye Irrit. 2 (H319)

Skin Sens. 1 (H317)

STOT SE 3 (H335)

Classification: PC AMINE® FL

Hazard

Pictograms



Danger

STOT RE 2 (H373)

Skin Corr. 1B (H314)

Aquatic Chronic 1 (H410)

Acute Tox. 4 - oral (H302)

#### Safety handling

Avoid contact with eyes and skin. Wear suitable protective clothing, gloves and eye/face protection at all times. Ensure adequate ventilation and avoid inhalation of vapour and aerosol. Use respirator. PC® ISO FL may cause sensitisation by inhalation and skin contact. In case of eye contact, first aid must be administered immediately. The eyes should be held open while flushing with a continuous low-pressure stream of water for at least 15 minutes. Seek medical advice immediately. If swallowed, seek medical attention immediately – do not induce vomiting. The use of barrier creams provides additional skin protection.



Material safety data sheets with all relevant information of PC AMINE® FL and PC® ISO FL are available on request.

#### Decomposition:



Cured PC® ISO / AMINE® FL can be disposed without restriction. The un-cured isocyanate and amine resin portions should be disposed according to local environmental laws and ordinances.

#### Transport and Packaging

PC AMINE® FL is classified in the terms of transport regulation as follows:

Land: ADR/RID-GGVSE: 8, II

Sea: IMDG/GGVSee: 8, II, UN 2735

Air: ICAO-TI/IATA-DGR: 8, II

PC® ISO FL is not classified as dangerous good in the terms of transport regulations.

#### Packaging

Amine component	Iso component
Pails 25 kg (55 lbs)	Pails 27.5 kg (60.6 lbs)
Drums 200 kg (441 lbs)	Drums 222 kg (489.5 lbs)
IBC 1,000 kg (2205 lbs)	IBCs 1,110 kg (2,447 lbs)

#### Storage

Keep away from air, protect against light, heat and humidity. Shelf life in originally closed and sealed drums 12 months under proper storing conditions for PC AMINE® FL and 6 months for PC® ISO FL. Changes in color have no negative effect on reactivity and physical properties of the elastomer.



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# Hightech surface protection

## Pure polyurea PC ISO AMINE / HD



### General Information

PC® ISO / PC AMINE® HD is a newly developed polyurea spray elastomer system (resin component). PC® ISO / PC AMINE® HD is designed for heavy duty surfaces with extremely resistant physical properties. The HD series is a

pure polyurea formulation designed for heavy traffic areas or industrial maintenance such as mining and truckbeds. It combines advantages of seamless films with very long life cycles and strong durability.

Properties	Unit	Typical values	Sales specifications
<b>Chemical and Physical Data of PC® ISO / PC AMINE® HD</b>			
Appearance Amine component Isocyanat resin		clear to yellowish liquid yellowish to brownish liquid	
Density at 25°C Amine component Isocyanat resin	g/cm <sup>3</sup> (lb/ft <sup>3</sup> ) g/cm <sup>3</sup> (lb/ft <sup>3</sup> )	1.00 (62.4) 1.12 (69.9)	
Primary amine value / NCO content	mg KOH / g wt%	210-225 16	> 210 15.4 – 16.4
Viscosity Amine component Isocyanat resin	mPa·s mPa·s	< 1500 1000	
Water content of the Amine	wt %	0.3	max. 0.5
Boiling point Amine component Isocyanat resin	°C (°F) °C (°F)	> 200 (> 392) > 200 (> 392)	
reaction time	s	12	
<b>Processing parameters</b>			
Block Temperature	°C (°F)	70 - 80 (158 - 176)	
Hose Temperatures (A and B)	°C (°F)	70 - 80 (158 - 176)	
Constant pressure	bar	120	
<b>Physical Properties of the reaction product / sprayed surface</b>			
cure time, walkable	min	2	
Density at 25°C (cured)	g/cm <sup>3</sup> (lb/ft <sup>3</sup> )	1.02 (63.7)	
Elongation ASTM D412	DIN 53455	225	
Tensile strength ASTM D412	DIN 53504	24	
Tear strength ASTM D624C		36	
Shore-A/D ASTM D 2240	DIN EN 53505	98/55	
Abrasion (Taber H 18)	DIN 53516	150 (approx.)	



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# Hightech surface protection

## Pure polyurea PC ISO AMINE / HE



### General Information

PC® ISO / AMINE® HE is a high elongation polyurea spray elastomer system. It consists of the two components PC AMINE® HE and PC® ISO HE. Compared to standard formulations,

PC® ISO / AMINE® HE offers excellent elasticity values. The HE series is a pure polyurea designed for crack/joint bridging or dynamic surface applications.

Properties	Unit	Typical values	Sales specifications
<b>Chemical and Physical Data of PC AMINE® HE / PC® ISO HE</b>			
Appearance Amine component Isocyanat resin		clear to yellowish liquid yellowish to brownish liquid	
Density at 25°C Amine component Isocyanat resin	g/cm³ (lb/ft³) g/cm³ (lb/ft³)	1.00 (62.4) 1.12 (69.9)	
Primary amine value / NCO content	mg KOH / g wt%	185 13	> 175 12.5 – 14.0
Viscosity Amine component Isocyanat resin	mPa·s mPa·s	< 1500 850	
Water content of the Amine	wt %	0.1	max. 0.25
Boiling point Amine component Isocyanat resin	°C (°F) °C (°F)	> 200 (> 392) > 200 (> 392)	
reaction time	s	16	
<b>Processing parameters</b>			
Block Temperature	°C (°F)	70 - 80 (158 - 176)	
Hose Temperatures (A and B)	°C (°F)	70 - 80 (158 - 176)	
Constant pressure	bar	120	
<b>Physical Properties of the reaction product / sprayed surface</b>			
cure time, walkable	min	2	
Density at 25°C (cured)	g/cm³ (lb/ft³)	1.02 (63.7)	
Elongation ASTM D412	DIN 53455	1000	
Tensile strength ASTM D412	DIN 53504	13	
Tear strength ASTM D624C		70	
Shore-A/D ASTM D 2240	DIN EN 53505	87/36	
Abrasion (Taber H 18)	DIN 53516	250 (approx.)	



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# Hightech surface protection

## Pure polyurea PC ISO AMINE / HE



### Application

PC<sup>®</sup> ISO / AMINE<sup>®</sup> HE offers a unique elongation behavior making it suitable for applications where thin coating is exposed to permanent movement or vibration. Depending on the air entrapment the elongation goes up to 1000% in spray applications.

Usual applications are:

- crack and joint bridging
- dynamic surfaces

### Processing

#### Surface preparation:

Before spraying the surface should be blast cleaned to achieve a smooth appearance. Also the surfaces should be free from any contaminations such as oil or dust and should be dry.

#### Processing parameters:

The re-coat window ranges from 20 seconds to a few hours depending on the application. The post cure takes at 20°C 24 hours. The temperature of the sprayed object can be theoretically between 0 to 50°C, with reaction times significantly longer at low temperatures in the range of 0 to 15°C. Observe dew point.

#### Spraying machine

A high pressure spray proportioning machine for plural heated components should be used for this material. Please contact us for details.

#### Necessary amount

For a sprayed area of 1 m<sup>2</sup> with 2 mm coating thickness approx. one litre of each component is needed.

#### Note:

The coverage figure is theoretical – due to wastage factors and the variety and nature of substrates, practical coverage figures may vary.

### Coating

Should be applied by specialized applicators. Do not dilute PC<sup>®</sup> ISO / AMINE<sup>®</sup> HE under any circumstances. Use appropriate chemical for flushing of equipment. If material is stored for a period of time thoroughly mix the amine component with drum mixer until a homogenous mixture and color is obtained.

### Safety and Handling

Classification: PC<sup>®</sup> ISO HE

Hazard

Pictograms



Danger

Resp. Sens. 1 (H334)

Carc. 2 (H351)

STOT RE 2 (H373)

Acute Tox. 4 inhalation (H332)

Skin Irrit. 2 (H315)

Eye Irrit. 2 (H319)

Skin Sens. 1 (H317)

STOT SE 3 (H335)

Classification: PC AMINE<sup>®</sup> HE

Hazard

Pictograms



Danger

STOT RE 2 (H373)

Skin Corr. 1B (H314)

Aquatic Chronic 2 (H411)

Acute Tox. 4 - oral (H302)

#### Safety handling

Avoid contact with eyes and skin. Wear suitable protective clothing, gloves and eye/face protection at all times. Ensure adequate ventilation and avoid inhalation of vapour and aerosol. Use respirator. PC<sup>®</sup> ISO HE may cause sensitisation by inhalation and skin contact. In case of eye contact, first aid must be administered immediately. The eyes should be held open while flushing with a continuous low-pressure stream of water for at least 15 minutes. Seek medical advice immediately. If swallowed, seek medical attention immediately – do not induce vomiting. The use of barrier creams provides additional skin protection.



Material safety data sheets with all relevant information of PC AMINE<sup>®</sup> HE and PC<sup>®</sup> ISO HE are available on request.

#### Decomposition:



Cured PC<sup>®</sup> ISO / AMINE<sup>®</sup> HE can be disposed without restriction. The un-cured isocyanate and amine resin portions should be disposed according to local environmental laws and ordinances.

#### Transport and Packaging

PC AMINE<sup>®</sup> HE is classified in the terms of transport regulation as follows:

Land: ADR/RID-GGVSE: 8, II

Sea: IMDG/GGVSee: 8, II, UN 2735

Air: ICAO-TI/IATA-DGR: 8, II

PC<sup>®</sup> ISO HE is not classified as dangerous good in the terms of transport regulations.

#### Packaging

Amine component	Iso component
Pails 25 kg (55 lbs)	Pails 27.5 kg (60.6 lbs)
Drums 200 kg (441 lbs)	Drums 222 kg (489.5 lbs)
IBC 1,000 kg (2205 lbs)	IBCs 1,110 kg (2,447 lbs)

#### Storage

Keep away from air, protect against light, heat and humidity. Shelf life in originally closed and sealed drums 12 months under proper storing conditions for PC AMINE<sup>®</sup> HE and 6 months for PC<sup>®</sup> ISO HE. Changes in color have no negative effect on reactivity and physical properties of the elastomer.



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# Sealing of the leakages



# Hightech surface protection

## Pure polyurea PC ISO AMINE / HD



### Application

In comparison to conventional polyurea, crosslinking of this product is increased, providing higher mechanical strength and decreased elongation. To adjust the elastomer properties, various modified versions also incorporating nano fillers of this grade are available for specific applications such as glass recycling or mining.

Usual applications are:

- heavy traffic areas
- industrial flooring and coatings

### Processing

#### Surface preparation:

Before spraying the surface should be blast cleaned to achieve a smooth appearance. Also the surfaces should be free from any contaminations such as oil or dust and should be dry.

#### Processing parameters:

The re-coat window ranges from 20 seconds to a few hours depending on the application. The post cure takes at 20°C 24 hours. The temperature of the sprayed object can be theoretically between 0 to 50°C, with reaction times significantly longer at low temperatures in the range of 0 to 15°C. Observe dew point.

#### Spraying machine

A high pressure spray proportioning machine for plural heated components should be used for this material. Please contact us for details.

#### Necessary amount

For a sprayed area of 1 m<sup>2</sup> with 2 mm coating thickness approx. one litre of each components is needed.

#### Note:

The coverage figure is theoretical – due to wastage factors and the variety and nature of substrates, practical coverage figures may vary.

### Coating

Should be applied by specialized applicators. Do not dilute PC<sup>®</sup> ISO / PC AMINE<sup>®</sup> HD under any circumstances. Use appropriate chemical for flushing of equipment. If material is stored for a period of time thoroughly mix the amine component with drum mixer until a homogenous mixture and color is obtained.

### Safety and Handling

Classification: PC<sup>®</sup> ISO HD

Hazard

Pictograms



Danger

Resp. Sens. 1 (H334)

Carc. 2 (H351)

STOT RE 2 (H373)

Acute Tox. 4 inhalation (H332)

Skin Irrit. 2 (H315)

Eye Irrit. 2 (H319)

Skin Sens. 1 (H317)

STOT SE 3 (H335)

Classification: PC AMINE<sup>®</sup> HD

Hazard

Pictograms



Danger

STOT RE 2 (H373)

Skin Corr. 1B (H314)

Aquatic Chronic 1 (H410)

Acute Tox. 4 - oral (H302)

#### Safety handling

Avoid contact with eyes and skin. Wear suitable protective clothing, gloves and eye/face protection at all times. Ensure adequate ventilation and avoid inhalation of vapour and aerosol. Use respirator. PC<sup>®</sup> ISO HD may cause sensitisation by inhalation and skin contact. In case of eye contact, first aid must be administered immediately. The eyes should be held open while flushing with a continuous low-pressure stream of water for at least 15 minutes. Seek medical advice immediately. If swallowed, seek medical attention immediately – do not induce vomiting. The use of barrier creams provides additional skin protection.



Material safety data sheets with all relevant information of PC AMINE<sup>®</sup> HD and PC<sup>®</sup> ISO HD are available on request.

#### Decomposition:



Cured PC<sup>®</sup> ISO / PC AMINE<sup>®</sup> HD can be disposed without restriction. The un-cured isocyanate and amine resin portions should be disposed according to local environmental laws and ordinances.

#### Transport and Packaging

PC AMINE<sup>®</sup> HD is classified in the terms of transport regulation as follows:

Land: ADR/RID-GGVSE: 8, II

Sea: IMDG/GGVSee: 8, II, UN 2735

Air: ICAO-TI/IATA-DGR: 8, II

PC<sup>®</sup> ISO HD is not classified as dangerous good in the terms of transport regulations.

#### Packaging

Amine component

Pails 25 kg (55 lbs)

Drums 200 kg (441 lbs)

IBC 1,000 kg (2205 lbs)

Iso component

Pails 27.5 kg (60.6 lbs)

Drums 222 kg (489.5 lbs)

IBCs 1,110 kg (2,447 lbs)

#### Storage

Keep away from air, protect against light, heat and humidity. Shelf life in originally closed and sealed drums 12 months under proper storing conditions for PC AMINE<sup>®</sup> HD and 6 months for PC<sup>®</sup> ISO HD. Changes in color have no negative effect on reactivity and physical properties of the elastomer.



Responsible  
Care



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MP 05/15



Hightech surface protection



# The walls after hydroblasting

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Hightech surface protection



# After shotcreting



Hightech surface protection

# Coating



Hightech surface protection

# Coating





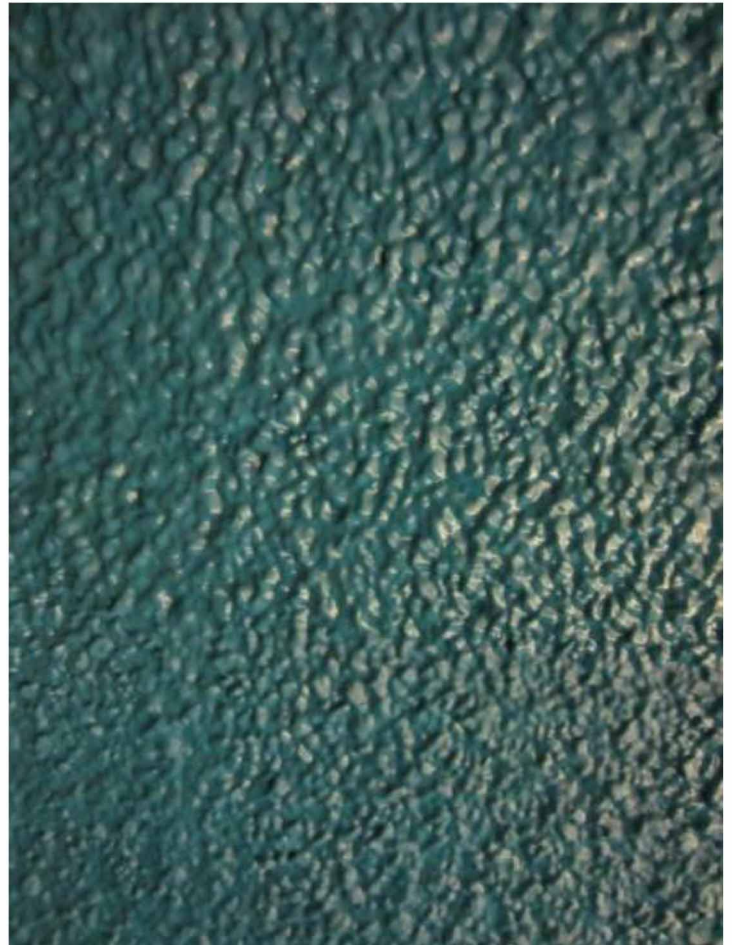
Hightech surface protection



# Polyurea, "our experience"

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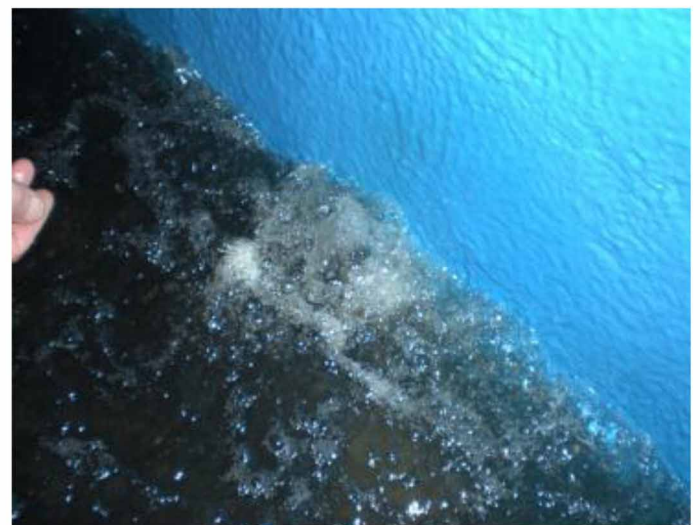
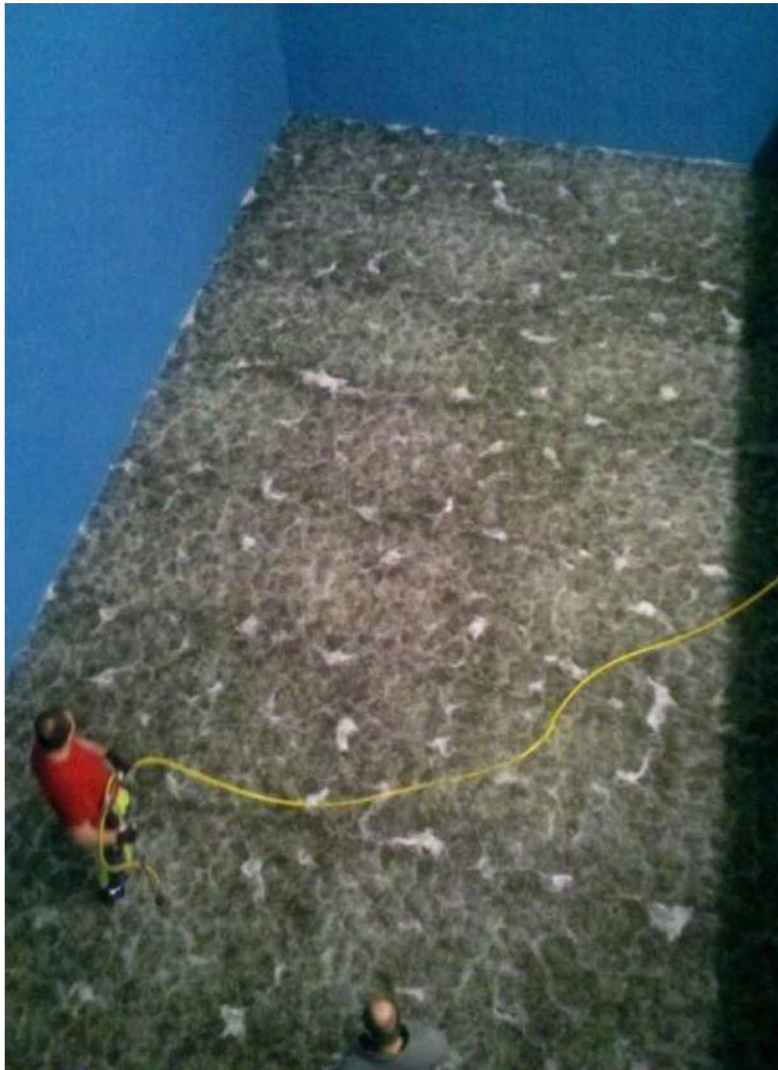
- Smoothness of the surface
- Number of layers
- Thickness of the coating
- Cost



# Hightech surface protection



## Testing of the basins after the repair







High Performance Coating, Water Proofing  
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**Performance Chemicals Handels GmbH** - Steinbecker Str. 102 K - D-21244 Buchholz

**Office Hamburg:** Performance Chemicals H. GmbH - Liebigstr. 2-20 - D-22113 Hamburg - Tel. / Fax: +49 (0) 40 8224 5678-9 / -1

**Internet:** [www.polyurethanes.de](http://www.polyurethanes.de) - **E-Mail:** [service@polyurethanes.de](mailto:service@polyurethanes.de)

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