



## Safety Data Sheet Binding Agent

Safety Data Sheet dated 1/9/2018, version 2

### 1. IDENTIFICATION

Product identifier

Mixture identification:

Trade name:

Binding Agent

Other means of identification:

Trade code:

6CR4500G10

Recommended use of the chemical and restrictions on use

Recommended use: Auxiliary for surface coating

Restrictions on use:

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Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Company:

Sirca S.p.A.

Address:

Viale Roma, 85

35010 S. Dono di Massanzago (PD) - ITALY

Tel. +39 0499322311

Distributed by:

GEMINI INDUSTRIES, INC.

2300 Holloway Drive

El Reno, OK 73036

USA

Tel. 1-800-262-5710

Fax 1-405-262-9310

www.gemini-coatings.com

Competent person responsible for the safety data sheet:

safety@sirca.it

Emergency phone number

For Hazardous Materials [or Dangerous Goods] Incident

Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night

1-800-424-9300 / +1 703-527-3887.

### 2. HAZARD(S) IDENTIFICATION

Classification of the chemical



Warning, Flam. Liq. 3, Flammable liquid and vapour.



Warning, Skin Irrit. 2, Causes skin irritation.



Warning, Eye Irrit. 2A, Causes serious eye irritation.



Warning, Skin Sens. 1, May cause an allergic skin reaction.



Warning, Carc. 2, Suspected of causing cancer.



Warning, STOT SE 3, May cause respiratory irritation.



Warning, STOT RE 2, May cause damage to organs through prolonged or repeated exposure.

Label elements

Hazard pictograms:



Warning

Hazard statements:

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H335 May cause respiratory irritation.

H373 May cause damage to organs through prolonged or repeated exposure.

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Precautionary statements:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash your face, hands and every exposed part thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352 IF ON SKIN: Wash with plenty of water and soap.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P312 Call a POISON CENTER/doctor/... if you feel unwell.
- P314 Get medical advice/attention if you feel unwell.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P363 Wash contaminated clothing before reuse.
- P370+P378 In case of fire: Use a CO2, Foam, Chemical powders for extinction.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

None

Hazards not otherwise classified identified during the classification process:

None

Ingredient(s) with unknown acute toxicity:

None.

Additional classification information

NFPA rating:



HMS rating:

HEALTH	*	2
FLAMMABILITY		3
PHYSICAL HAZARD		1
PERSONAL PROTECTION		

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances


















N.A.

Mixtures

Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

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- >= 25% - < 48% xylene [isomer mixture]  
 REACH No.: 01-2119488216-32-xxxx, Index number: 601-022-00-9, CAS: 1330-20-7, EC: 215-535-7
-  B.6/3 Flam. Liq. 3 H226
  -  A.10/1 Asp. Tox. 1 H304
  -  A.3/2A Eye Irrit. 2A H319
  -  A.8/3 STOT SE 3 H335
  -  A.9/2 STOT RE 2 H373
  -  A.2/2 Skin Irrit. 2 H315
  -  A.1/4/Dermal Acute Tox. 4 H312
  -  A.1/4/Inhal Acute Tox. 4 H332
- >= 7% - < 9.9% ethylbenzene  
 REACH No.: 01-2119489370-35-xxxx, Index number: 601-023-00-4, CAS: 100-41-4, EC: 202-849-4
-  A.10/1 Asp. Tox. 1 H304
  -  A.2/2 Skin Irrit. 2 H315
  -  A.6/2 Carc. 2 H351
  -  A.9/2 STOT RE 2 H373
  -  B.6/2 Flam. Liq. 2 H225
  -  A.1/4/Inhal Acute Tox. 4 H332
- >= 0.1% - < 0.2% Fatty acids, C18-unsatd., trimers, compds. with 9-octadecen-1-amine,(Z9)-  
 REACH No.: 01-2119971821-33-xxxx, CAS: 147900-93-4, EC: 604-612-4
-  A.9/1 STOT RE 1 H372
  -  A.4.2/1 Skin Sens. 1 H317
- >= 0.1% - < 0.2% Fatty acids, C18-unsatd., trimers, compds. with oleylamine  
 REACH No.: 01-2119974148-28-xxxx, CAS: 85711-55-3, EC: 288-315-1
-  A.4.2/1 Skin Sens. 1 H317

#### 4. FIRST-AID MEASURES

Description of necessary measures

In case of skin contact:

- Immediately take off all contaminated clothing.
- Remove contaminated clothing immediately and dispose off safely.
- After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

- After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
- Protect uninjured eye.

In case of Ingestion:

- Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

- In case of inhalation, consult a doctor immediately and show him packing or label.

Most important symptoms/effects, acute and delayed

None

Indication of immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

#### 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:



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In case of fire: Use a CO<sub>2</sub>, Foam, Chemical powders for extinction.  
Unsuitable extinguishing media:  
None in particular.  
Specific hazards arising from the chemical  
Do not inhale explosion and combustion gases.  
Burning produces heavy smoke.  
Hazardous combustion products:  
None  
Explosive properties: N.A.  
Oxidizing properties: N.A.  
Special protective equipment and precautions for fire-fighters  
Use suitable breathing apparatus .  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Move undamaged containers from immediate hazard area if it can be done safely.

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### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures  
Wear personal protection equipment.  
Remove all sources of ignition.  
Wear breathing apparatus if exposed to vapours/dusts/aerosols.  
Provide adequate ventilation.  
Remove persons to safety.  
Use appropriate respiratory protection.  
See protective measures under point 7 and 8.  
Methods and materials for containment and cleaning up  
Wash with plenty of water.

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### 7. HANDLING AND STORAGE

Precautions for safe handling  
Avoid contact with skin and eyes, inhalation of vapours and mists.  
Exercise the greatest care when handling or opening the container.  
Do not use on extensive surface areas in premises where there are occupants.  
Use localized ventilation system.  
Don't use empty container before they have been cleaned.  
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.  
Contaminated clothing should be changed before entering eating areas.  
Do not eat or drink while working.  
See also section 8 for recommended protective equipment.  
Conditions for safe storage, including any incompatibilities  
Always keep in a well ventilated place.  
Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.  
Keep away from flame and sparks. Avoid accumulating electrostatic charge.  
Place recipients on the ground whilst decanting, and wear anti-static clothing and shoes.  
  
Keep away from food, drink and feed.  
Incompatible materials:  
None in particular.  
Instructions as regards storage premises:  
Cool and adequately ventilated.  
Safety electric system.  
Storage temperature:  
Store at ambient temperature.

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters  
xylene [isomer mixture] - CAS: 1330-20-7  
(OEL (IT)) - TWA(8h): 221 mg/m<sup>3</sup>, 50 ppm - STEL: 442 mg/m<sup>3</sup>, 100 ppm - Behaviour: Binding - Notes: pelle  
EU - TWA(8h): 221 mg/m<sup>3</sup>, 50 ppm - STEL: 442 mg/m<sup>3</sup>, 100 ppm - Notes: Skin  
ACGIH - TWA(8h): 100 ppm - STEL: 150 ppm - Notes: A4, BEI - URT and eye irr, CNS impair  
ethylbenzene - CAS: 100-41-4  
(OEL (IT)) - TWA(8h): 442 mg/m<sup>3</sup>, 100 ppm - STEL: 884 mg/m<sup>3</sup>, 200 ppm - Behaviour: Binding - Notes: pelle  
EU - TWA(8h): 442 mg/m<sup>3</sup>, 100 ppm - STEL: 884 mg/m<sup>3</sup>, 200 ppm - Notes: Skin  
ACGIH - TWA(8h): 20 ppm - Notes: A3, BEI - URT irr, kidney dam (nephropathy), cochlear impair  
DNEL Exposure Limit Values  
xylene [isomer mixture] - CAS: 1330-20-7  
Worker Industry: 180 mg/Kg-bw/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects  
Worker Industry: 77 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects  
Consumer: 108 mg/Kg-bw/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects  
Consumer: 1872 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects  
Consumer: 12.5 mg/Kg-bw/day - Exposure: Human Oral - Frequency: Long Term, systemic effects

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ethylbenzene - CAS: 100-41-4

Worker Industry: 180 mg/kg/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 293 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Industry: 77 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

#### PNEC Exposure Limit Values

xylene [isomer mixture] - CAS: 1330-20-7

Target: Fresh Water - Value: 0.327 mg/l

Target: Fresh Water - Value: 0.327 mg/l

Target: occasional emission - Value: 0.327 mg/l

Target: Microorganisms in sewage treatments - Value: 6.58 mg/l

Target: Soil (agricultural) - Value: 2.31 mg/kg - Notes: dry

Target: Marine water sediments - Value: 12.46 mg/kg - Notes: dry

Target: Freshwater sediments - Value: 12.46 mg/kg - Notes: dry

ethylbenzene - CAS: 100-41-4

Target: Fresh Water - Value: 0.1 mg/l

Target: Marine water - Value: 0.01 mg/l

Target: Marine water sediments - Value: 13.7 mg/l

Target: Freshwater sediments - Value: 13.7 mg/l

Target: occasional emission - Value: 0.1 mg/l

#### Appropriate engineering controls:

None

#### Individual protection measures

##### Eye protection:

Use close fitting safety goggles, don't use eye lens.

##### Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

##### Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

##### Respiratory protection:

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

Use adequate protective respiratory equipment.

#### Thermal Hazards:

None

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and colour:	liquid
Odour:	characteristic
Odour threshold:	N.A.
pH:	N.A.
Melting point / freezing point:	< 1° C
Initial boiling point and boiling range:	> 55° C
Solid/gas flammability:	N.A.
Upper/lower flammability or explosive limits:	N.A.
Vapour density:	N.A.
Flash point:	21°C ≤ fp < 55°C ( 69.8°F ≤ fp < 131°F)
Evaporation rate:	N.A.
Vapour pressure:	N.A.
Relative density:	0.9700 Kg/l a 20°C
Solubility in water:	N.A.
Solubility in oil:	N.A.
Partition coefficient (n-octanol/water):	N.A.
Auto-ignition temperature:	> 250° C
Decomposition temperature:	N.A.
Miscibility:	N.A.
Fat Solubility:	N.A.
Conductivity:	N.A.
Substance Groups relevant properties	N.A.

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## 10. STABILITY AND REACTIVITY

### Reactivity

It may generate dangerous reactions (See subsections below)

### Chemical stability

It may generate dangerous reactions (See subsections below)

### Possibility of hazardous reactions

No dangerous reaction is stored and used appropriately.

### Conditions to avoid

Avoid accumulating electrostatic charge.

Vapours can form explosive mixtures with air.

### Incompatible materials

Avoid contact with combustible materials. The product could catch fire.



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Hazardous decomposition products  
None.

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#### 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Toxicological information of the product:

N.A.

Toxicological information of the main substances found in the product:

xylene [isomer mixture] - CAS: 1330-20-7

a) acute toxicity:

Test: LD50 - Route: Inhalation - Species: Rat = 27 mg/l - Duration: 4h

Test: LD50 - Route: Oral - Species: Rat = 3523 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit = 12126 mg/kg

ethylbenzene - CAS: 100-41-4

a) acute toxicity:

Test: LD50 - Route: Skin - Species: Rabbit = 15400 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 4000 Ppm - Duration: 4h

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Route: Skin - Species: Cavia porcellus Negative

Substance(s) listed on the NTP report on Carcinogens:

None.

Substance(s) listed on the IARC Monographs:

xylene [isomer mixture] - Group 3

ethylbenzene - Group 2B.

Substance(s) listed as OSHA Carcinogen(s):

None.

Substance(s) listed as NIOSH Carcinogen(s):

None.

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#### 12. ECOLOGICAL INFORMATION

Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

xylene [isomer mixture] - CAS: 1330-20-7

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 1 mg/l - Duration h: 48

Endpoint: LC50 - Species: Fish = 3.2 mg/l - Duration h: 96

Endpoint: LC50 - Species: Algae = 2.6 mg/l - Duration h: 73

ethylbenzene - CAS: 100-41-4

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 42.3 mg/l - Duration h: 96

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Other adverse effects

None

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#### 13. DISPOSAL CONSIDERATIONS

Waste treatment and disposal methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

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#### 14. TRANSPORT INFORMATION

UN number

ADR-UN Number: 1263

DOT-UN Number: 1263

IATA-UN Number: 1263

IMDG-UN Number: 1263

UN proper shipping name

ADR-Shipping Name: Paint Related material

DOT-Shipping Name: Paint Related material

IATA-Shipping Name: Paint Related material

IMDG-Shipping Name: Paint Related material

Transport hazard class(es)

ADR-Class: 3

DOT-Class: 3

IATA-Class: 3



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IMDG-Class:	3
Packing group	
ADR-Packing Group: II	
DOT-Packing Group: II	
IATA-Packing group: II	
IMDG-Packing group: II	
Environmental hazards	
ADR-Environmental Pollutant:	No
IMDG-Marine pollutant:	No
Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)	No
Special precautions	
ADR-Tunnel Restriction Code:	D/E
DOT-Special provisions:	149, B52, IB2, T4, TP1, TP8, TP28
IATA-Passenger Aircraft:	353
IATA-Cargo Aircraft:	364
IATA-S.P.:	A72
IATA-ERG:	8L
IMDG-EmS:	F-E, <u>S-E</u>
IMDG-Storage category:	B
IMDG-Storage notes:	None
N.A.	
Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)	No

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## 15. REGULATORY INFORMATION

### USA - Federal regulations

- TSCA - Toxic Substances Control Act
  - TSCA inventory: all the components are listed on the TSCA inventory.
  - TSCA listed substances:
    - ethylbenzene is listed in TSCA Section 4.
- SARA - Superfund Amendments and Reauthorization Act
  - Section 302 – Extremely Hazardous Substances: no substances listed.
  - Section 304 – Hazardous substances: no substances listed.
  - Section 313 – Toxic chemical list: xylene [isomer mixture], ethylbenzene.
- CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
  - Substance(s) listed under CERCLA: xylene [isomer mixture] - Reportable quantity: 100 pounds
  - ethylbenzene - Reportable quantity: 1000 pounds.
  - Reportable quantity for mixture: 226.6109204 pounds.
- CAA - Clean Air Act
  - CAA listed substances:
    - xylene [isomer mixture] is listed in CAA Section 111, Section 112(b) - HAP, Section 112(b) - HON
    - ethylbenzene is listed in CAA Section 111, Section 112(b) - HAP, Section 112(b) - HON.
- CWA - Clean Water Act
  - CWA listed substances:
    - xylene [isomer mixture] is listed in CWA Section 311, Section 304
    - ethylbenzene is listed in CWA Section 311, Section 304, Section 307.

### USA - State specific regulations

- California Proposition 65
  - Substance(s) listed under California Proposition 65:
    - ethylbenzene - Listed as carcinogen.
- Massachusetts Right to know
  - Substance(s) listed under Massachusetts Right to know:
    - xylene [isomer mixture]
    - ethylbenzene.
- New Jersey Right to know
  - Substance(s) listed under New Jersey Right to know:
    - xylene [isomer mixture]
    - ethylbenzene.
- Pennsylvania Right to know
  - Substance(s) listed under Pennsylvania Right to know:
    - xylene [isomer mixture]
    - ethylbenzene.

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## 16. OTHER INFORMATION

- Text of phrases referred to under heading 3:
- H226 Flammable liquid and vapour.
  - H304 May be fatal if swallowed and enters airways.
  - H319 Causes serious eye irritation.
  - H335 May cause respiratory irritation.



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H373 May cause damage to organs through prolonged or repeated exposure.  
H315 Causes skin irritation.  
H312 Harmful in contact with skin.  
H332 Harmful if inhaled.  
H351 Suspected of causing cancer.  
H225 Highly flammable liquid and vapour.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H317 May cause an allergic skin reaction.

Safety Data Sheet dated 1/9/2018, version 2  
Sections modified from the previous revision:

2. HAZARD(S) IDENTIFICATION  
3. COMPOSITION/INFORMATION ON INGREDIENTS  
5. FIRE-FIGHTING MEASURES  
7. HANDLING AND STORAGE  
8. EXPOSURE CONTROLS/PERSONAL PROTECTION  
11. TOXICOLOGICAL INFORMATION  
14. TRANSPORT INFORMATION

#### Disclaimer:

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. The information relates only to the specific material and may not be valid for such material used in combination with any other material or in any process.

This Safety Data Sheet cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average