



Safety Data Sheet

WB Hardener

Safety Data Sheet dated 11/10/2016, version 1

1. IDENTIFICATION

Product identifier

Mixture identification:

Trade name:

WB Hardener

Other means of identification:

Trade code:

6CW1S02

Recommended use of the chemical and restrictions on use

Recommended use: Auxiliary for surface coating

Restrictions on use:

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.



Danger, Resp. Sens. 1, May cause allergy or asthma symptoms or breathing difficulties if inhaled.



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



Warning, STOT SE 3, May cause respiratory irritation.

Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

Label elements

Hazard pictograms:



Danger

Hazard statements:

H226 Flammable liquid and vapour.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

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.

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P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P284 [In case of inadequate ventilation] wear respiratory 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.
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER/doctor/... if you feel unwell.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
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:



HMIS 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:

>= 25% - < 48% Aliphatic polyisocyanate

CAS: 666723-27-9



A.4.2/1 Skin Sens. 1 H317

US-HAE/C3 Aquatic Chronic 3 H412

>= 20% - < 25% Hexamethylene diisocyanate, oligomers

REACH No.: 01-2119488934-20-xxxx, CAS: 28182-81-2



A.1/4/Inhal Acute Tox. 4 H332



A.8/3 STOT SE 3 H335

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A.4.2/1 Skin Sens. 1 H317

>= 12.5% - < 20% Aliphatic polyisocyanate

CAS: 160994-68-3



A.1/4/Inhal Acute Tox. 4 H332



A.8/3 STOT SE 3 H335



A.4.2/1 Skin Sens. 1 H317

US-HAE/C3 Aquatic Chronic 3 H412

>= 0.1% - < 0.2% hexamethylene-di-isocyanate

REACH No.: 01-2119457571-37-xxxx, Index number: 615-011-00-1, CAS: 822-06-0, EC: 212-485-8



A.3/2A Eye Irrit. 2A H319



A.8/3 STOT SE 3 H335



A.2/2 Skin Irrit. 2 H315



A.4.1/1 Resp. Sens. 1 H334



A.4.2/1 Skin Sens. 1 H317



A.1/3/Inhal Acute Tox. 3 H331

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.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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:

In case of fire: Use a CO2, 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.

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.



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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.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.
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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

hexamethylene-di-isocyanate - CAS: 822-06-0
(OEL (IT)) - LTE: 0.005 ppm
ACGIH - LTE(8h): 0.005 ppm - Notes: URT irr, resp sens

DNEL Exposure Limit Values

hexamethylene-di-isocyanate - CAS: 822-06-0
Worker Industry: 0.07 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
Worker Industry: 0.035 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Industry: 0.035 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

PNEC Exposure Limit Values

hexamethylene-di-isocyanate - CAS: 822-06-0
Target: Marine water - Value: 0.00774 mg/l
Target: Fresh Water - Value: 0.0774 mg/l
Target: Freshwater sediments - Value: 0.01334 mg/kg - Notes:: Dry weight
Target: Marine water sediments - Value: 0.001334 mg/kg - Notes:: Dry weight
Target: Soil (agricultural) - Value: 0.0026 mg/kg - Notes:: Dry weight
Target: Microorganisms in sewage treatments - Value: 8.42 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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and colour:	liquid
Odour:	characteristic
Odour threshold:	N.A.
pH:	N.A.
Melting point / freezing point:	< 1° C

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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:	1.0800 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.
Viscosity (typical value):	25.00 " Din cup # 4
Miscibility:	N.A.
Fat Solubility:	N.A.
Conductivity:	N.A.
Substance Groups relevant properties	N.A.

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.

Hazardous decomposition products
None.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Toxicological information of the mixture:
N.A.

Toxicological information of the main substances found in the mixture:

Aliphatic polyisocyanate - CAS: 666723-27-9

a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg - Notes: Method: OECD TG 403
Test: LC50 - Route: Inhalation - Species: Rat Female = 0.39 mg/l - Duration: 4h

b) skin corrosion/irritation:
Test: Skin Irritant - Species: Rabbit Negative

c) serious eye damage/irritation:
Test: Eye Irritant - Species: Rabbit Positive

d) respiratory or skin sensitisation:
Test: Skin Sensitization - Species: Mouse Positive
Test: Inhalation Sensitization Negative

e) germ cell mutagenicity:
Test: Genotoxicity Negative

Hexamethylene diisocyanate, oligomers - CAS: 28182-81-2

a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat Female > 2500 mg/kg - Notes: Method: OECD TG 423
Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg - Notes: Method: OECD TG 402
Test: LC50 - Route: Inhalation Mist - Species: Rat Female = 390 mg/m3 - Duration: 4h - Notes: Method: OECD 403

Aliphatic polyisocyanate - CAS: 160994-68-3

a) acute toxicity:
Test: LC50 - Route: Oral - Species: Rat > 2000 mg/kg
Test: LC50 - Route: Inhalation Dust - Species: Rat Female = 390 mg/m3 - Duration: 4h

hexamethylene-di-isocyanate - CAS: 822-06-0

a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat = 746 mg/kg - Notes: Method: OECD TG 401
Test: LD50 - Route: Skin - Species: Rabbit > 7000 mg/kg - Notes: Method: OECD TG 402
Test: LC50 - Route: Inhalation - Species: Rat = 0.124 mg/l - Duration: 4h - Notes: Method: OECD TG 403 - Conc. del vapore saturo di 1,6-HDI a 25°C 0,095 mg/l
Test: NOAEL - Route: Inhalation - Species: Rat 0.035 mg/m3 - Duration: 6h - Notes: Method OECD linee guide 453
Test: LOAEL - Route: Inhalation - Species: Rat 0.175 mg/m3 - Duration: 6h - Notes: Method OECD linee guide 453



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Substance(s) listed on the NTP report on Carcinogens:
None.
Substance(s) listed on the IARC Monographs:
None.
Substance(s) listed as OSHA Carcinogen(s):
hexamethylene-di-isocyanate.
Substance(s) listed as NIOSH Carcinogen(s):
None.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Adopt good working practices, so that the product is not released into the environment.
Aliphatic polyisocyanate - CAS: 666723-27-9
a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish = 35.2 mg/l - Duration h: 96
Aliphatic polyisocyanate - CAS: 160994-68-3
a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish = 28.3 mg/l - Duration h: 96
Persistence and degradability
N.A.
Bioaccumulative potential
N.A.
Mobility in soil
N.A.
Other adverse effects
None

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.

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
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, S-E
IMDG-Storage category: B
IMDG-Storage notes: None

15. REGULATORY INFORMATION

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USA - Federal regulations

TSCA - Toxic Substances Control Act

TSCA inventory: all the components are listed on the TSCA inventory.

TSCA listed substances:

None.

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: hexamethylene-di-isocyanate.

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Substance(s) listed under CERCLA: hexamethylene-di-isocyanate - Reportable quantity: 100 pounds.

Reportable quantity for mixture: 68212.82401 pounds.

CAA - Clean Air Act

CAA listed substances:

hexamethylene-di-isocyanate is listed in CAA Section 112(b) - HAP.

CWA - Clean Water Act

CWA listed substances:

None.

USA - State specific regulations

California Proposition 65

Substance(s) listed under California Proposition 65:

None.

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

hexamethylene-di-isocyanate.

New Jersey Right to know

Substance(s) listed under New Jersey Right to know:

hexamethylene-di-isocyanate.

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

No substances listed.

16. OTHER INFORMATION

Text of phrases referred to under heading 3:

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H319 Causes serious eye irritation.

H315 Causes skin irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H331 Toxic if inhaled.

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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.
LTE:	Long-term exposure.
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health



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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.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).