



Safety Data Sheet
 according to Regulation (EC)
 No. 2015/830



SECTION 1: Identification of the Substance/Mixture and the Company/Undertaking

1.1 Product Identifier	1H134000	Revision Date:	13/07/2017
Product Name:	CARBOTHANE 134 HS - B	Supersedes Date:	14/05/2015
		Version Number:	1
1.2 Relevant identified uses of the substance or mixture and uses advised against	Hardener for 2 components coatings - Industrial use.		
Product to be mixed with:	CARBOTHANE 134 HS - A		
Mixing ratio by volume Part A/ Part B:	8 / 1		
1.3 Details of the supplier of the safety data sheet			
Importer:	StonCor Europe 9, Rue du Travail - 1400 Nivelles, Belgium		
Manufacturer:	Carboline Italia, S.p.a. Via Margherita Vigano' De Vizzi . n 77 20092 Cinisello Balsamo (MI) Italy		
	Regulatory / Technical Information: +32 67493710 Nivelles, Belgium +39 02253751 Cinisello Balsamo, Italy		
Datasheet Produced by:	Solvesi, Anna - ehs@stoncor.com		
1.4 Emergency telephone number:	CHEMTREC +1 703 5273887 (Outside US) PPC +1 412 6816669 (Outside US) Centro Antiveleni di Roma +39 06 49978000 (CAV Policlinico Umberto I - Roma)(24h/24h) Emergenza ambientale +39 335-601 32 88 / +39 347-949 84 88 / +39 348-246 90 99		

SECTION 2: Hazard Identification

2.1 Classification of the substance or mixture

Classification according to Classification, Labeling & Packaging Regulation (EC) 1272/2008

HAZARD STATEMENTS

Skin drying or cracking	EUH066
Other EU extensions	EUH204
Flammable Liquid, category 3	H226
Skin Sensitizer, category 1	H317
Acute Toxicity, Inhalation, category 4	H332

STOT, single exposure, category 3, RTI
 Hazardous to the aquatic environment, Chronic, category 3

H335
 H412

2.2 Label elements

Symbol(s) of Product



Signal Word

Warning

Named Chemicals on Label

Hexamethylene diisocyanate, hexamethylene diisocyanate, oligomers, Solvent naphtha (petroleum), light arom.**

HAZARD STATEMENTS

Skin drying or cracking	EUH066	Repeated exposure may cause skin dryness or cracking.
Other EU extensions	EUH204	Contains isocyanates. May produce an allergic reaction.
Flammable Liquid, category 3	H226	Flammable liquid and vapour.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
STOT, single exposure, category 3, RTI	H335	May cause respiratory irritation.
Hazardous to the aquatic environment, Chronic, category 3	H412	Harmful to aquatic life with long lasting effects.

PRECAUTION PHRASES

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P403+233	Store in a well-ventilated place. Keep container tightly closed.

ADDITIONAL INFORMATION

** Note P : The classification as a carcinogen or mutagen need not apply; the substance contains less than 0,1 % w/w benzene

2.3 Other hazards

No Information

Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

SECTION 3: Composition/Information On Ingredients

3.2 Mixtures

Hazardous Ingredients

CAS-No.	EINEC No.	Name According to EEC	%
28182-81-2	500-060-2	hexamethylene diisocyanate, oligomers	75-100
123-86-4	204-658-1	n-butyl acetate	2.5-10
64742-95-6	265-199-0	Solvent naphtha (petroleum), light arom.**	2.5-10
822-06-0	212-485-8	Hexamethylene diisocyanate	<0.1

CAS-No.	REACH Reg No.	CLP Symbols	CLP Hazard Statements	M-Factors
28182-81-2	01-2119485796-17	GHS07	H317-332-335	
123-86-4	01-2119485493-29	GHS02-GHS07	H226-336	

64742-95-6 01-2119455851-35 GHS02-GHS07-GHS08-GHS09
822-06-0 01-2119457571-37 GHS06-GHS08

H226-304-335-336-411
H302-315-317-319-330-334-335

Additional Information: The text for CLP Hazard Statements shown above (if any) is given in Section 16.

SECTION 4: First-aid Measures

4.1 Description of First Aid Measures

GENERAL NOTES: When symptoms persist or in all cases of doubt seek medical advice.

AFTER INHALATION: Move to fresh air. Consult a physician after significant exposure.

AFTER SKIN CONTACT: Use a mild soap if available. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

AFTER EYE CONTACT: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses.

AFTER INGESTION: Gently wipe or rinse the inside of the mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

Self protection of the first aider:

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

No Information

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

SECTION 5: Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam

FOR SAFETY REASONS NOT TO BE USED: Alcohol, Alcohol based solutions, any other media not listed above.

5.2 Special hazards arising from the substance or mixture

No Information

5.3 Advice for firefighters

Flash back possible over considerable distance. In the event of fire, wear self-contained breathing apparatus. Do not use a solid water stream as it may scatter and spread fire. Hazardous decomposition products formed under fire conditions. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Water reactive substance. Reacts with water to release flammable gas. May cause fire.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Remove all sources of ignition.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains.

6.3 Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

FURTHER INSTRUCTIONS: Please refer to EU disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Vapours may form

explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Electrical equipment should be protected to the appropriate standard. Preparation may charge electrostatically: always use earthing leads when transferring from one container to another. Use only in area provided with appropriate exhaust ventilation. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Wear personal protective equipment. Do not breathe vapours or spray mist. Use only explosion-proof equipment. Keep away from sources of ignition - No smoking. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Direct sources of heat.

STORAGE CONDITIONS: Store in original container. Keep locked up or in an area accessible only to qualified or authorised persons. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

7.3 Specific end use(s)

No specific advice for end use available.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (UK WELS)

<u>Name</u>	<u>CAS-No.</u>	<u>LTEL ppm</u>	<u>STEL ppm</u>	<u>STEL mg/m3</u>	<u>LTEL mg/m3</u>
hexamethylene diisocyanate, oligomers	28182-81-2				
n-butyl acetate	123-86-4	150	200	966	724
Solvent naphtha (petroleum), light arom.**	64742-95-6				100
Hexamethylene diisocyanate	822-06-0			0.07	0.02

<u>Name</u>	<u>CAS-No.</u>	<u>OEL Note</u>
hexamethylene diisocyanate, oligomers	28182-81-2	
n-butyl acetate	123-86-4	
Solvent naphtha (petroleum), light arom.**	64742-95-6	
Hexamethylene diisocyanate	822-06-0	Sen

FURTHER ADVICE: Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified under the EU CLP Regulation.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respirator with a vapour filter (EN 141). Respirator with a vapor filter. In case of insufficient ventilation wear suitable respiratory equipment. Combination filter: A2-P2.

EYE PROTECTION: Tightly fitting safety goggles.

HAND PROTECTION: Rubber or plastic gloves. Nitrile rubber. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Long sleeved clothing. Remove and wash contaminated clothing before re-use. Protective gloves complying with EN 374: Nitrile rubber.

OTHER PROTECTIVE EQUIPMENT: No Information

ENGINEERING CONTROLS: Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

Chemical Name:

hexamethylene diisocyanate, oligomers

EC No.:

500-060-2

CAS-No.:

28182-81-2

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							
Inhalation								
Dermal								

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.127 mg/l
Fresh water sediments	266700 mg/kg (dry)
Marine water	0.0127 mg/l
Marine sediments	26670 mg/kg (dry)
Food chain	
Microorganisms in sewage treatment soil (agricultural)	53182 mg/kg (dry)
Air	

Chemical Name:

n-butyl acetate

EC No.:

204-658-1

CAS-No.:

123-86-4

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required					2 mg/kg bw/day - neurotoxicity-		2 mg/kg bw/day -neurotoxicity-
Inhalation	300 mg/m ³ (irritation (respiratory tract))	600 mg/m ³	300 mg/m ³	48 mg/m ³	300 mg/m ³ (irritation (respiratory tract))	300 mg/m ³ (irritation (respiratory tract))	35.7 mg/m ³ (irritation (respiratory tract))	12 mg/m ³
Dermal		11 mg/kg bw/day - neurotoxicity-		7 mg/kg bw/day	No hazard identified	6 mg/kg bw/day - neurotoxicity		3.4 mg/kg bw/day

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.18 mg/l
Fresh water sediments	0.981 mg/kg
Marine water	0.018 mg/l
Marine sediments	0.0981 mg/kg
Food chain	
Microorganisms in sewage treatment soil (agricultural)	35.6 mg/L
Air	0.0903 mg/kg

Chemical Name:

Solvent naphtha (petroleum), light arom.**

EC No.:

265-199-0

CAS-No.:

64742-95-6

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required						11 mg/kg bw/day	
Inhalation				150 mg/m ³				32 mg/m ³
Dermal				25 mg/kg bw/day				11 mg/kg bw/day

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.635 mg/l
Fresh water sediments	3.29 mg/kg
Marine water	0.0635 mg/l
Marine sediments	0.329 mg/kg
Food chain	
Microorganisms in sewage treatment	100 mg/l
soil (agricultural)	0.29 mg/kg
Air	

SECTION 9: Physical and Chemical Properties**9.1 Information on basic physical and chemical properties**

Appearance:	clear liquid
Physical State	LIQUID
Odor	SOLVENT
Odor threshold	Not determined
pH	N/A
Melting point / freezing point (°C)	Not determined
Boiling point/range (°C)	126 - N.D.
Flash Point, (°C)	53 °C DIN 53213
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	0.6% - 7.5%
Vapour Pressure	N/D
Vapour density	Not determined
Relative density	1.13 g/cm ³ DIN EN ISO2811
Solubility in / Miscibility with water	reactive
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Viscosity	500mPa.sDINENISO3219/A3
Explosive properties	Not determined
Oxidising properties	Not determined

9.2 Other information

VOC Content g/l:	288
Grams of VOC per liter of coating product as applied per ISO 11890-1 and/or ISO 11890-2.	
Specific Gravity (g/cm ³)	1.13

SECTION 10: Stability and Reactivity**10.1 Reactivity**

No reactivity hazards known under normal storage and use conditions. Water reactive.

10.2 Chemical stability

Stable under recommended storage conditions. Risk of ignition. Violent chemical reaction; water reactive

10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

Direct sources of heat.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

SECTION 11: Toxicological Information**11.1 Information on toxicological effects****Acute Toxicity:**

Oral LD50:	No Information
Inhalation LC50:	No Information

Irritation: No information available.

Corrosivity: No information available.

Sensitization: No information available.

Repeated dose toxicity: No information available.

Carcinogenicity: No information available.

Mutagenicity: No information available.

Toxicity for reproduction: No information available.

STOT-single exposure: No information available.

STOT-repeated exposure: No information available.

Aspiration hazard: No information available.

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested.
Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Name According to EEC</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
28182-81-2	hexamethylene diisocyanate, oligomers	5000 mg/kg, oral, rat	>2000 mg/Kg (dermal, rat, M-F)	18500 mg/m ³ /1H inhalation, rat
123-86-4	n-butyl acetate	10760 mg/kg, rat, oral	14112 mg/Kg (rabbit)	23.4 mg/l/4/h (rat)

64742-95-6 Solvent naphtha (petroleum), light arom.** 4700 mg/kg, oral, rat
 822-06-0 Hexamethylene diisocyanate 710 mg/kg, oral rat

3670 ppm/8 hours, rat, inhalation
 0.124 mg/l (inhalation, 4h, rat)

Additional Information:

No Information

SECTION 12: Ecological Information**12.1 Toxicity:**

EC50 48hr (Daphnia): No information
 IC50 72hr (Algae): No information
 LC50 96hr (fish): No information

12.2 Persistence and degradability: No information

12.3 Bioaccumulative potential: No information

12.4 Mobility in soil: No information

12.5 Results of PBT and vPvB assessment: The product does not meet the criteria for PBT/VPvB in accordance with Annex XIII.

12.6 Other adverse effects: No information

<u>CAS-No.</u>	<u>Name According to EEC</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
28182-81-2	hexamethylene diisocyanate, oligomers	No information	> 1000 mg/l (ErC50-static 72h scenedesmus subspicatus)	>100 mg/l (Danio rerio, LD50, 96h)
123-86-4	n-butyl acetate	No information	No information	18 mg/L (Pimephales promelas)
64742-95-6	Solvent naphtha (petroleum), light arom.**	No information	2,6 mg/l (C50,72h Pseudokirchneriella subcapitata)	
822-06-0	Hexamethylene diisocyanate	No information	77,4 mg/l (ErC50, static, desmodesmus subspicatus)	8.8 mg/L (Brachydanio rerio)

Further Ecological Information

Contains the following ingredients which are classified as water dangerous according to EEC directive No. 76/464/EEC in percentages > 1%.

<u>CAS-No.</u>	<u>Name According to EEC</u>
64742-95-6	Solvent naphtha (petroleum), light arom.**

SECTION 13: Disposal Considerations

13.1 WASTE TREATMENT METHODS: Do not burn, or use a cutting torch on, the empty drum. If recycling is not practicable, dispose of in compliance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

European Waste Code: 080111*
Packaging Waste Code: 150110

SECTION 14: Transport Information

14.1	UN number	UN1263
14.2	UN proper shipping name	. PAINT
	Technical name	Not applicable
14.3	Transport hazard class(es)	3
	Subsidiary shipping hazard	Not applicable
14.4	Packing group	III
14.5	Environmental hazards	Marine Pollutant: NO
14.6	Special precautions for user	Not applicable
	EmS-No.:	F-E, S-E
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	Not applicable

SECTION 15: Regulatory Information**15.1 Safety, health and environmental regulations/legislation for the substance or mixture:****National Regulations:**

Denmark Product Registration Number:	Not available
Danish MAL Code:	Not available
Danish MAL Code - Mixture:	Not available
Sweden Product Registration Number:	Not available
Norway Product Registration Number:	Not available
WGK Class:	2
Directive 2004/42/CE :	400 g/l (subcat j)
Covered by Directive 2012/18/EC (Seveso III):	P5c
Restrictions to product or to substances according to Annex XVII, Regulation (CE) 1907/2006:	Not applicable

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: Other Information**Text for CLP Hazard Statements shown in Section 3 describing each ingredient:**

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Reasons for revision

Regulatory Formula Source Changed
 Substance Regulatory CAS Number Changed
 Substance and/or Product Properties Changed in Section(s):
 08 - Exposure Controls/Personal Protection
 09 - Physical and Chemical Properties
 11 - Toxicological Information
 12 - Ecological Information
 13 - Disposal Information
 14 - Transportation Information
 15 - Regulatory Information
 Substance Chemical Name Changed
 Substance Hazard Threshold % Changed
 Composition Information Changed
 Statement(s) Changed

This Safety Data Sheet (SDS) has been revised to meet the new EU CLP requirements. There have been both formatting and content changes based on the CLP classification (if applicable), please review each section of the SDS for specific changes.

List of References:

This Safety Data Sheet was compiled with data and information from the following sources:

The Ariel Regulatory Database provided by the 3E Corporation in Copenhagen, Denmark;
 European Union Commission Regulation No. 1907/2006 on REACH as amended within Commission Regulation (EU) 2015/830;
 European Union (EC) Regulation No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) and subsequent technical progress adaptations (ATP);
 EU Council Decision 2000/532/EC and its Annex entitled "List of Wastes".

Acronym & Abbreviation Key:

CLP	Classification, Labeling & Packaging Regulation
EC	European Commission
EU	European Union
US	United States
CAS	Chemical Abstract Service
EINECS	European Inventory of Existing Chemical Substances
REACH	Registration, Evaluation, Authorization of Chemicals Regulation
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
LTEL	Long term exposure limit
STEL	Short term exposure limit
OEL	Occupational exposure limit
ppm	Parts per million
mg/m ³	Milligrams per cubic meter
TLV	Threshold Limit Value
ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety & Health Administration
PEL	Permissible Exposure Limits
VOC	Volatile organic compounds
g/l	Grams per liter
mg/kg	Milligrams per kilogram
N/A	Not applicable
LD50	Lethal dose at 50%
LC50	Lethal concentration at 50%
EC50	Half maximal effective concentration
IC50	Half maximal inhibitory concentration
PBT	Persistent bioaccumulative toxic chemical
vPvB	Very persistent and very bioaccumulative
EEC	European Economic Community
ADR	International Transport of Dangerous Goods by Road
RID	International Transport of Dangerous Goods by Rail
UN	United Nations
IMDG	International Maritime Dangerous Goods Code

IATA	International Air Transport Association
MARPOL	International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978
IBC	International Bulk Container
RTI	Respiratory Tract Irritation
NE	Narcotic Effects

For further information, please contact: Technical Services Department

The information on this sheet corresponds to our present knowledge. It is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions and recommendations are not followed.