



Safety Data Sheet
according to Regulation (EC)
No. 453/2010

1. Identification of the Substance/Mixture and the Company/Undertaking

- 1.1 Product Identifier** W573-0-900 **Revision Date:** 02/09/2015
Product Name: WINDMASTIC TC HSX REP. KIT **Supersedes Date:** 17/09/2014
 PART B **Version Number:** 6
- 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:** WINDMASTIC TC HSX REP. KIT PART A
Mixing ratio by volume Part A/ Part B: 5:1
- 1.3 Details of the supplier of the safety data sheet**
- Importer:** None
- Manufacturer:** Carboline Norge AS
 Postboks 593
 3412 Lierstranda
 Norway
- Regulatory / Technical Information:**
 +47 32 85 73 00
 +47 32 85 74 00
- Datasheet Produced by:** Larsen, Beate - ehs@stoncor.com
- 1.4 Emergency telephone number:** CHEMTREC +1 703 5273887 (Outside US)

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	H335
Hazardous to the aquatic environment, Chronic, category 3	H412

2.2 Label elements

Symbol(s) of Product



Signal Word

Warning

Named Chemicals on Label

hexamethylene diisocyanate, hexamethylene diisocyanate, oligomers

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, RT1	H335	May cause respiratory irritation.
Hazardous to the aquatic environment, Chronic, category 3	H412	Harmful to aquatic life with long lasting effects.

PRECAUTION PHRASES

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P403+233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to waste treatment/disposal facility in accordance with local, state, and federal regulations.

ADDITIONAL INFORMATION

ADD-02	Content of hexamethylene diisocyanate (CAS-no 822-06-0): <0.5%.
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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.

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
64742-95-6	265-199-0	solvent naphtha (petroleum), light arom.	2.5-10
123-86-4	204-658-1	n-butyl acetate	2.5-10
822-06-0	212-485-8	hexamethylene diisocyanate	0.1-1.0

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-GHS08-GHS09	H226-304-411	

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

4. First-aid Measures

4.1 Description of First Aid Measures

GENERAL NOTES: Show this safety data sheet to the doctor in attendance.

AFTER INHALATION: Keep respiratory tract clear. Give oxygen or artificial respiration if needed. When risk of unconsciousness, place and transport the victim in secured recovery position. Provide fresh air, rest and warmth. Call a physician immediately.

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. Do not use solvent or thinners to clean skin.

AFTER EYE CONTACT: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.

AFTER INGESTION: Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously: Keep head below hips to prevent aspiration of stomach vomit into lungs. Provide fresh air, rest and warmth.

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

Harmful by inhalation. Irritating to respiratory system. Irritating to skin. May cause sensitization by skin contact.

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

5. Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam, Water Fog

FOR SAFETY REASONS NOT TO BE USED: Alcohol, Alcohol based solutions, any other media not listed above. Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Heating or fire conditions liberates toxic gas. Flash back possible over considerable distance. As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Vapours may form explosive mixtures with air. Solvent vapours are heavier than air and may spread along floors and ignite.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. Hazardous decomposition products formed under fire conditions. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Keep containers and surroundings cool with water spray.

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. Local authorities should be advised if significant spillages cannot be contained.

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). Clean with detergents. Avoid solvents.

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.

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). 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. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is being used. 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. Open drum carefully as content may be under pressure. Use only explosion-proof equipment. Avoid breathing vapors, mist or gas. Avoid contact with skin, eyes and clothing. Apply technical measures to comply with the occupational exposure limits (see section 8).

Keep away from food, drink and animal feeding stuffs. When using, do not eat, drink or smoke. Wash hands before eating, drinking, or smoking.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Avoid heat, sparks, flames and other ignition sources.

STORAGE CONDITIONS: Store in original container. Store in upright position only. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons. Storage of flammable liquids. Contamination may result in dangerous pressure increases - closed containers may rupture. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. Store away from: oxidising materials, acids, and alkalis.

7.3 Specific end use(s)

No specific advice for end use available.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (UK WELS)

<u>Name</u>	<u>%</u>	<u>LTEL ppm</u>	<u>STEL ppm</u>	<u>STEL mg/m3</u>	<u>LTEL mg/m3</u>	<u>OEL Note</u>
hexamethylene diisocyanate, oligomers	75-100					
solvent naphtha (petroleum), light arom.	2.5-10					
n-butyl acetate	2.5-10	150	200	966	724	
hexamethylene diisocyanate	0.1-1.0					

FURTHER ADVICE: Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified at the EU level under the dangerous substances and preparations regulation. Annotations: Carc = Capable of causing cancer and/or heritable genetic damage, Sen = Capable of causing occupational asthma, Sk = Can be absorbed through the skin.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: Always wear a self-contained breathing apparatus or full-face airline respirator when using this chemical.

EYE PROTECTION: If splashes are likely to occur, wear: Face-shield, tightly fitting safety goggles.

HAND PROTECTION: Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. 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). Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature). Long sleeved clothing. Remove and wash contaminated clothing before re-use. Use chemical resistant gloves and lotions and barrier creams to prevent drying of the skin. Use chemical resistant gloves (EN 374): Butyl rubber. Viton®. Recommended glove material for mixed product: Protective gloves complying with EN 374: Butyl rubber. Nitril rubber.

OTHER PROTECTIVE EQUIPMENT: Ensure that eyewash stations and safety showers are close to the workstation location.

ENGINEERING CONTROLS: 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							
Inhalation	960 mg/m3	960 mg/m3	480 mg/m3	480 mg/m3	859.7 mg/m3	859.7 mg/m3	102.34 mg/m3	102.34 mg/m3
Dermal								

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)	0.0903 mg/kg
Air	

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

Appearance:	Yellowish
Physical State	LIQUID
Odor	Solvent
Odor threshold	Not determined
pH	Not determined
Melting point / freezing point (°C)	Not determined
Boiling point/range (°C)	160
Flash Point, (°C)	50

Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	1 - 7.5
Vapour Pressure	Not determined
Vapour density	>1 (air = 1)
Relative density	1,08 - 1,18
Solubility in / Miscibility with water	Insoluble
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	470
Decomposition temperature (°C)	Not determined
Viscosity	500 mPas
Explosive properties	Not determined
Oxidising properties	Not determined

9.2 Other information

VOC Content g/l: 112

Grams of VOC per liter of coating product as applied per ISO 11890-1 and/or ISO 11890-2.

Specific Gravity (g/cm³) 1.13

10. Stability and Reactivity

10.1 Reactivity

Reacts violently with amines and alcohol.

10.2 Chemical stability

Stable under recommended storage conditions. Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

10.3 Possibility of hazardous reactions

Preparation reacts slowly with water resulting in evolution of CO₂.

10.4 Conditions to avoid

Avoid heat, sparks, flames and other ignition sources.

10.5 Incompatible materials

Keep away from oxidising agents, strongly acid or alkaline materials, as well as of amines, alcohols and water.

10.6 Hazardous decomposition products

Carbon monoxide, carbon dioxide, nitrogen oxide, cyanides, isocyanate vapours.

11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD₅₀: No information available on the product itself as the product is not tested.

Inhalation LC₅₀: No information available on the product itself as the product is not tested.

Irritation: Vapour/spray mist may irritate respiratory system and lungs.

Corrosivity: No information available.

Sensitization: May cause respiratory allergy and allergic contact eczema.

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
64742-95-6	solvent naphtha (petroleum), light arom.	4700 mg/kg, oral, rat		3670 ppm/8 hours, rat, inhalation
123-86-4	n-butyl acetate	10760 mg/kg, rat, oral	14112 mg/Kg (rabbit)	23.4 mg/l/4/h (rat)
822-06-0	hexamethylene diisocyanate	710 mg/kg, oral rat		0.124 mg/l (inhalation, 4h, rat)

Additional Information:

Allergic persons and workers with difficulty in breathing should not be employed in powder application. Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effect, such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates. Respiration of solvent vapour may cause dizziness. May cause allergic respiratory reaction. May cause allergic skin reaction. Isocyanates may cause acute irritation and/or sensitisation of the respiratory system leading to tightness of the chest, wheeziness and an asthmatic condition. Chronic exposure has been associated with various neurotoxic effects including permanent brain damage. Inhalation of vapour of mist can cause headache, nausea, irritation of nose, throat, and lungs. Hot processing of this material release isocyanate containing vapours, known to be toxic by inhalation.

12. Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia):	>100 mg/L
IC50 72hr (Algae):	No information
LC50 96hr (fish):	>100 mg/L

12.2 Persistence and degradability: No information

12.3 Bioaccumulative potential: Not expected to bioaccumulate.

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 (phimephales promelas)
64742-95-6	solvent naphtha (petroleum), light arom.	No information	No information	No information

822-06-0	hexamethylene diisocyanate	No information	77,4 mg/l (ErC50, static, desmodemus subspicatus)	8.8 mg/L (Brachydanio rerio)
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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.

13. Disposal Considerations

- 13.1 WASTE TREATMENT METHODS:** Do not burn, or use a cutting torch on, the empty drum. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Empty containers should be taken to an approved waste handling site for recycling or disposal. Dispose of waste material at an approved (hazardous) waste treatment/disposal facility in accordance with applicable local state, and federal regulations. Do not dispose of waste with normal garbage, or to sewer systems.

European Waste Code: 08 05 01

Packaging Waste Code: 15 01 10

14. Transport Information

14.1	UN number	UN1263
14.2	UN proper shipping name	PAINT
	Technical name	
14.3	Transport hazard class(es)	3
	Subsidiary shipping hazard	
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

15. Regulatory Information

- 15.1 Safety, health and environmental regulations/legislation for the substance or mixture:**

National Regulations:

Denmark Product Registration Number:

Danish MAL Code: 5 - 5

Sweden Product Registration Number:

Norway Product Registration Number: P-318148

WGK Class: 3

Chemical Safety Assessment:

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

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

Changes have been made to Section 8 of the Safety Data Sheet (SDS). Please refer to the Exposure Controls / Personal Protection information in Section 8 of the SDS. Changes have been made to Section 10 of the Safety Data Sheet (SDS). Please refer to the Stability and Reactivity information in Section 10 of this SDS.

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
 ESIS (The European Chemical Substances Information System), provided by the European Commission Joint Research Centre in Ispra, Italy
 Annex VI of the EU Council Directive 67/548/EEC
 Council Directive 67/548/EEC - Annex I or EU Council Directive 1999/45/EC
 European Union (EC) Regulation No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation)
 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/m3	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

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.