

**Safety Data Sheet according to Regulation
(EC) 'No. 2020/878****STONHARD****SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking**

- 1.1 Product Identifier** STR-ISO **Revision Date:** 15/04/2025
- Product Name:** STR/NVL ISO **Supersedes Date:** 11/04/2024
- UFI Code:** No Information
- Contain nanoform:** No
- 1.2 Relevant identified uses of the substance or mixture and uses advised against** Hardener for 2 components coatings - Industrial use. Advised against: others than recommended
- 1.3 Details of the supplier of the safety data sheet**
- Importer:** Stonhard Europe SRL
9, Rue du Travail - 1400 Nivelles, Belgium
- Manufacturer:** Stonhard, Division Of StonCor Group, Inc.
1000 East Park Avenue
Maple Shade, NJ 08052
- +1 856 7797500(US)
- Regulatory / Technical Information:
+32 67493710 Nivelles, Belgium
- Datasheet Produced by:** ehs@stonhard.com
- 1.4 Emergency telephone number:** +1 703-741-5970 - North America
+1 800-424-9300
+55 11 4349 1359 - South America
+52 55 8526 4930 - Central America
+44 20 3885 0382 - Middle East, Eastern Europe, Western Europe, and Africa
+65 3163 8374 - Asia, South Asia, And Oceania

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

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

HAZARD STATEMENTS

Skin Irritation, category 2	H315
Skin Sensitizer, category 1	H317
Eye Irritation, category 2	H319
Acute Toxicity, Inhalation, category 4	H332
Respiratory Sensitizer, category 1	H334
STOT, single exposure, category 3, RTI	H335
Carcinogenicity, category 2	H351
STOT, repeated exposure, category 2	H373

2.2 Label elements

Symbol(s) of Product



Signal Word

Danger

Named Chemicals on Label

4,4'-methylenediphenyl diisocyanate, Diphenylmethane-diisocyanate, isomers and homologues

HAZARD STATEMENTS

Skin Irritation, category 2	H315	Causes skin irritation.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
Respiratory Sensitizer, category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT, single exposure, category 3, RTI	H335	May cause respiratory irritation.
Carcinogenicity, category 2	H351	Suspected of causing cancer.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.

PRECAUTION PHRASES

P201	Obtain special instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory 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.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P308+313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P337+313	If eye irritation persists: Get medical advice/attention.
P342+311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P362+364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment:

No Information

Endocrine disrupting properties - Toxicity

Name According to EEC

CAS-No.

No Information

Endocrine disrupting properties - Ecotoxicity

Name According to EEC

CAS-No.

No Information

SECTION 3: Composition/Information On Ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Hazardous ingredients

<u>Name According to EEC</u> <u>EINEC No.</u> <u>CAS-No.</u> <u>REACH Reg No.</u>	<u>%</u>	<u>Classifications</u>	SCL Value: ATE Value: M-Factor:

Diphenylmethane-diisocyanate, isomers and homologues 618-498-9 9016-87-9 No Information	50 - <75	H315-317-319-332-334-335-351-373 Acute Tox. 4 Inhalation, Carc. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Irrit. 2, Skin Sens. 1, STOT RE 2, STOT SE 3 RTI	SCL Value: ATE Value: M-Factor: (acute) M-Factor: (chronic)	- - - -
4,4'-methylenediphenyl diisocyanate 202-966-0 101-68-8 01-2119457014-47	25 - <50	H315-317-319-330-334-335-351-373 Acute Tox. 1 Inhalation, Carc. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Irrit. 2, Skin Sens. 1, STOT RE 2, STOT SE 3 RTI	SCL Value: ATE Value: M-Factor: (acute) M-Factor: (chronic)	~ H319 ≥ 5~ H319 ≥ 5 H315 ≥ 5~ H319 ≥ 5 H315 ≥ 5 H334 ≥ 0.1~ H319 ≥ 5 H315 ≥ 5 H334 ≥ 0.1 H335 ≥ 5 - - -

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.

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

AFTER INGESTION: 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

Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes and respiratory system. May cause long-term adverse effects in the aquatic environment.

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: Firefighting 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

Heating or fire can release toxic gas.

5.3 Advice for firefighters

ABC powder. Hazardous decomposition products formed under fire conditions. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Water reactive

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Ensure adequate ventilation. Use personal protective equipment.

6.1.2 For emergency responders

No Information

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains. Keep the container open.

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 8 and 13 for further information.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Use only in area provided with appropriate exhaust ventilation. Provide sufficient air exchange and/or exhaust in work rooms. Wear personal protective equipment. Do not breathe vapours or spray mist. Persons with a history of 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.

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: Keep from any possible contact with water.

STORAGE CONDITIONS: Store in original container. Keep container tightly closed in a dry and well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.

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>LTCL ppm</u>	<u>STCL ppm</u>	<u>STCL mg/m³</u>	<u>LTCL mg/m³</u>
Diphenylmethane-diisocyanate, isomers and homologues	9016-87-9			0.07	0.02
4,4'-methylenediphenyl diisocyanate	101-68-8			0.07	0.02

<u>Name</u>	<u>CAS-No.</u>	<u>OEL Note</u>
Diphenylmethane-diisocyanate, isomers and homologues	9016-87-9	
4,4'-methylenediphenyl diisocyanate	101-68-8	

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.

Chemical Name:

4,4'-methylenediphenyl diisocyanate

EC No.:

202-966-0

CAS-No.:

101-68-8

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			20 mg/kg bw/d		
Inhalation	0.1 mg/m ³	0.1 mg/m ³	0.05 mg/m ³	0.05 mg/m ³	0.05 mg/m ³	0.05 mg/m ³	0.025 mg/m ³	0.025 mg/m ³
Dermal	28.7 mg/cm ²	50 mg/kg bw/d			17.2 mg/cm ²	25 mg/kg bw/d		

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	>1 mg/l
Fresh water sediments	
Marine water	>0.1 mg/l
Marine sediments	
Food chain	
Microorganisms in sewage treatment	>1 mg/l
soil (agricultural)	>1 mg/kg
Air	

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. No personal respiratory protective equipment normally required.

EYE PROTECTION: Ensure that eyewash stations and safety showers are close to the workstation location. Safety glasses. Safety goggles.

HAND PROTECTION: Latex gloves Impervious gloves.

Body Protection: Long sleeved clothing.
Remove and wash contaminated clothing before re-use.

OTHER PROTECTIVE EQUIPMENT: No Information

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

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Colour:	Not determined
Physical State	LIQUID
Odor	Slightly musty
Odor threshold	Not determined
pH	Non-aqueous
Melting point / freezing point (°C)	Not determined
Boiling point or initial boiling point and boiling range (°C)	N.D. - N.D.
Flash Point, (°C)	220
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Lower and upper explosive limit	N/A - N/A
Vapour Pressure	4X10 ⁻⁶
Relative vapour density	8.5
Density and/or relative density	Not determined
Solubility in / Miscibility with water	Reacts with water
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Kinematic viscosity	150-260 cps
Particle characteristics	Not measured

9.2 Other information

VOC Content g/l:	5
Grams of VOC per liter of coating product as applied (mixture of Part A and Part B) per ASTM D2369 Method E.	
Specific Gravity (g/cm ³)	1.240

SECTION 10: Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

Keep from any possible contact with water.

10.5 Incompatible materials

Reacts violently in contact with acids, amines, driers, polymerisation accelerators and easily oxidized materials. Contact with water or moist air liberates irritating gas.

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 hazard classes as defined in Regulation (EC) No 1272/2008****Acute Toxicity:**

Oral LD50: >2000 mg/kg oral (rat)

Inhalation LC50: 490 mg/m³, 4hr (rat)

Dermal LD50: 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>	<u>Gas LC50</u>	<u>Dust/Mist LC50</u>
9016-87-9	Diphenylmethane-diisocyanate, isomers and homologues	>10000 mg/kg	>9400 mg/kg	0.49 mg/l (4 h, Aerosol. rat)		
101-68-8	4,4'-methylenediphenyl diisocyanate	> 7,616 mg/kg oral (Rat)	>9400 mg/kg	0.368 mg/l, 4 hrs (Rat)	0.000	0.000

Additional Information:

Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates.

11.2 Information on other hazards

Endocrine disrupting properties - Toxicity

Name According to EEC

CAS-No.

No Information

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

EC50 48hr (Daphnia):	No information
IC50 72hr (Algae):	1640 mg/l
LC50 96hr (fish):	No information

12.2 Persistence and degradability: 0% biodegradation, exposure time 28 days

12.3 Bioaccumulative potential: No information

12.4 Mobility in soil: No information

12.5 Results of PBT and vPvB assessment: No Information

12.6 Endocrine disrupting properties**Endocrine disrupting properties - Ecotoxicity**

Name According to EEC

CAS-No.

No Information

12.7 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>
9016-87-9	Diphenylmethane-diisocyanate, isomers and homologues	No information	1640 mg/l	>1000 mg/l
101-68-8	4,4'-methylenediphenyl diisocyanate	>1000 mg/l	No information	597 mg/l (zebra fish)

SECTION 13: Disposal Considerations

13.1 WASTE TREATMENT METHODS: 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: No Information

Packaging Waste Code: 150110

SECTION 14: Transport Information

	ADR/RID	ADN	IMDG	IATA
14.1 UN-number or ID number	N/A	N/A	N/A	N/A
14.2 UN proper shipping name	Not regulated for transport	Not regulated for transport	Not regulated for transport	Not regulated for transport
14.3 Transport Hazard Class(es)	N/A	N/A	N/A	N/A
14.4 Packing Group	No Information	No Information	No Information	No Information
14.5 Enviromental Hazards	No Information	No Information	No Information	No Information

14.6 Special precautions for user Not applicable
EmS-No.: N/A

14.7 Maritime transport in bulk according to IMO intruments 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:	1914892
Danish MAL Code:	Not available
Danish MAL Code - Mixture:	Not available
Sweden Product Registration Number:	Not available
Norway Product Registration Number:	Not available
Germany WGK Class:	Not available

Covered by Directive 2012/18/EC (Seveso III): Not applicable

Restrictions to product or to substances according to Annex XVII, Regulation (CE) 1907/2006: Not applicable

Annex XIV, Regulation (CE) 1907/2006 - Authorisation List:

CAS-No. Name According to EEC

Not Applicable

SVHC - Substances of very high concern (Candidate List - Art. 59 REACH):

CAS-No. Name According to EEC

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:

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.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Reasons for revision

Substance and/or Product Properties Changed in Section(s):

08 - Exposure Controls/Personal Protection

15 - Regulatory Information

Revision Statement(s) Changed

This Safety Data Sheet (SDS) has been revised to meet updated national hazard communication

standards which have adopted the provisions of the UN GHS system. There have been both formatting and content changes based on the GHS classification (if applicable), Please review each section of the SDS for specific changes. 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.
- Joint Research Centre in Ispra, Italy.
- Regulation (EC) 1272/2008 with subsequent amendments.
- Regulation (EC) 1272/2006 with subsequent amendments.
- Commission Regulation (EU) 2020/878
- EU Council Decision 2000/532/EC and its Annex entitled "List of Wastes"
- Safety Data Sheet from raw material supplier
- The classification declared in sec. 2.2 is based on the calculation methods set out in Annex I and Annex II of the CLP Reg. 1272/2008 on the composition of the formula.

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
IMO	International Maritime Organization

- Note P: The classification as a carcinogen or mutagen need not apply; the substance contains less than 0,1 % w/w benzene
- Note 10: The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter $\leq 10 \mu\text{m}$.

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.