

SAFETY DATA SHEET Denso Bore Wrap

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name Denso Bore Wrap

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Part of a corrosion protection system.

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier Winn & Coales (Denso) Ltd

Denso House Chapel Road West Norwood SE27 0TR

+44 (0)208 670 7511 mail@denso.net

1.4. Emergency telephone number

Emergency telephone +44 (0)208 670 7511 (M-F, 8-5 GMT)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 -

H351 STOT SE 3 - H335 STOT RE 2 - H373

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms





Signal word Danger

Hazard statements H315 Causes skin irritation.

H319 Causes serious eye irritation.

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

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.

Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust.

P261 Avoid breathing dust.

P264 Wash contaminated skin 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.

P284 [In case of inadequate ventilation] wear respiratory protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

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 CENTRE/doctor if you feel unwell.

P314 Get medical advice/ attention if you feel unwell.

P321 Specific treatment (see medical advice on this label).

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.

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.

P362+P364 Take off contaminated clothing and wash it before reuse.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/ container in accordance with national regulations.

Contains

4,4'-methylenediphenyl diisocyanate, Polymeric MDI, methylenediphenyl diisocyanate

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

4,4'-methylenediphenyl diisocyanate 10-30%

CAS number: 101-68-8 EC number: 202-966-0

Classification

Acute Tox. 4 - H332

Skin Irrit. 2 - H315

Eye Irrit. 2 - H319

Resp. Sens. 1 - H334

Skin Sens. 1 - H317

Carc. 2 - H351

STOT SE 3 - H335

STOT RE 2 - H373

Polymeric MDI CAS number: 9016-87-9

Classification

Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1B - H317 Carc. 2 - H351

STOT SE 3 - H335 STOT RE 2 - H373

Polyether polyol 5-10%

CAS number: 25791-96-2

Classification

Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319

methylenediphenyl diisocyanate 1-5%

Classification

Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373

Carbon black <1%

CAS number: 1333-86-4

Classification

Not Classified

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

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Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for

breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration. Get medical attention. Place unconscious person on their side in the recovery position and ensure breathing can take place. In the event of any sensitisation symptoms developing, ensure further exposure is

avoided.

Ingestion Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if

the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention if symptoms are severe or persist. Due to the physical nature of this product, it is

unlikely that ingestion will occur.

Skin contact It is important to remove the substance from the skin immediately. In the event of any

sensitisation symptoms developing, ensure further exposure is avoided. Remove

contamination with soap and water or recognised skin cleansing agent. Get medical attention

if symptoms are severe or persist after washing.

Eye contact Rinse with water. Do not rub eye. Remove any contact lenses and open eyelids wide apart.

Get medical attention if any discomfort continues.

Protection of first aidersFirst aid personnel should wear appropriate protective equipment during any rescue.

4.2. Most important symptoms and effects, both acute and delayed

General information The severity of the symptoms described will vary dependent on the concentration and the

length of exposure.

Inhalation This product is moderately irritating. May cause sensitisation or allergic reactions in sensitive

individuals. A single exposure may cause the following adverse effects: Headache.

Exhaustion and weakness. Prolonged or repeated exposure may cause the following adverse

effects: Suspected of causing cancer.

Ingestion May cause sensitisation or allergic reactions in sensitive individuals. May cause irritation.

Prolonged or repeated exposure may cause the following adverse effects: Suspected of

causing cancer.

Skin contact May cause skin sensitisation or allergic reactions in sensitive individuals. Redness. Irritating to

skin. Prolonged or repeated exposure may cause the following adverse effects: Suspected of

causing cancer.

Eye contact Irritating to eyes.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctorTreat symptomatically. May cause sensitisation or allergic reactions in sensitive individuals.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry

powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing

media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards This product is toxic.

Hazardous combustion products

Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting

Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid inhalation of vapours and contact with skin and eyes. Use suitable respiratory protection if ventilation is inadequate.

6.2. Environmental precautions

Environmental precautions

The product contains a substance which is very toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment. Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Provide adequate ventilation. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections

For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions

Read and follow manufacturer's recommendations. Do not handle until all safety precautions have been read and understood. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Avoid contact with skin and eyes. Avoid breathing gas, fume, vapours or spray. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. Suspected of causing cancer. Use only outdoors or in a well-ventilated area. Avoid discharge to the aquatic environment. Keep container dry. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene

Do not eat, drink or smoke when using this product. Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash it before reuse. Wash at the end of each work shift and before eating, smoking and using the toilet.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Store locked up. Store in a dry

place. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep container dry. Protect containers from damage. Protect from moisture.

Protect from freezing and direct sunlight.

Storage class Miscellaneous hazardous material storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

Carbon black

Long-term exposure limit (8-hour TWA): WEL 3.5 mg/m³ Short-term exposure limit (15-minute): WEL 7 mg/m³

WEL = Workplace Exposure Limit.

Ingredient comments No dust formed during normal use.

8.2. Exposure controls

Protective equipment









Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Ensure control measures are regularly inspected and maintained.

Eye/face protection

Wear eye protection. Personal protective equipment for eye and face protection should comply with European Standard EN166. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection

Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body

protection clothing to prevent repeated or prolonged skin contact.

May cause skin sensitisation or allergic reactions in sensitive individuals. Wear appropriate

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Hygiene measures Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke

when using this product. Wash promptly if skin becomes contaminated. Take off immediately all contaminated clothing and wash it before reuse. Remove contaminated clothing and

protective equipment before entering eating areas.

Respiratory protection Respiratory protection complying with an approved standard should be worn if a risk

assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140. Check that the respirator fits tightly and the filter is changed regularly.

Environmental exposure controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Liquid-impregnated cloth.

ColourOdourAlmost odourless.Odour thresholdNot determined.pHNot determined.

Melting point Not determined.

Initial boiling point and range Not determined.

Flash point > 117°C / 243°F Method: Not specified.

Evaporation rateNot determined.Evaporation factorNot determined.Flammability (solid, gas)Not determined.

Upper/lower flammability or

explosive limits

Not determined.

Other flammability Not determined.

Vapour pressure <1 mm Hg @ 25°C/77°F

Vapour density > 1

Relative density ~ 2.5

Bulk density Not determined.

Solubility(ies) Slightly soluble in water.

Partition coefficient Not determined.

Auto-ignition temperature Not determined.

Decomposition Temperature Not determined.

Viscosity Technically not feasible.

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Explosive properties Not determined.

Explosive under the influence

of a flame

Not considered to be explosive.

Oxidising properties The mixture itself has not been tested but none of the ingredient substances meet the criteria

for classification as oxidising.

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity See the other subsections of this section for further details.

10.2. Chemical stability

Stable at normal ambient temperatures and when used as recommended. Stable under the

prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous

reactions

Polymerises on contact with water or moisture. The following materials may react with the product: Alcohols, glycols. Strong alkalis. Amines. Epoxides. Phenols, cresols. Water,

moisture.

10.4. Conditions to avoid

Conditions to avoid Avoid exposure to high temperatures or direct sunlight. Avoid heat, flames and other sources

of ignition.

10.5. Incompatible materials

Materials to avoid Alcohols, glycols. Strong alkalis. Amines. Epoxides. Phenols, cresols. Water, moisture.

10.6. Hazardous decomposition products

Hazardous decomposition

products

Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects The product reacts with water to form a solid, insoluble reaction product which is not

biodegradable.

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

ATE oral (mg/kg) 8,333.33

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Acute Tox. 4 - H332 Harmful if inhaled.

ATE inhalation (vapours mg/l) 40.74

Skin corrosion/irritation

Animal data Irritating.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

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Respiratory sensitisation

Respiratory sensitisation There is evidence that the product can cause respiratory hypersensitivity.

Skin sensitisation

Skin sensitisation May cause skin sensitisation or allergic reactions in sensitive individuals.

Germ cell mutagenicity

Genotoxicity - in vitroBased on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Suspected of causing cancer.

IARC carcinogenicity

Contains a substance which may be potentially carcinogenic. IARC Group 2B Possibly

carcinogenic to humans.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity -

Based on available data the classification criteria are not met.

development

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE 3 - H335 May cause respiratory irritation.

Target organs Respiratory system, lungs

Specific target organ toxicity - repeated exposure

STOT - repeated exposure STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Aspiration hazard Not relevant. Solid.

General information May cause cancer after repeated exposure. Risk of cancer depends on duration and level of

exposure. The severity of the symptoms described will vary dependent on the concentration

and the length of exposure.

Inhalation May cause sensitisation or allergic reactions in sensitive individuals. A single exposure may

cause the following adverse effects: Headache. Exhaustion and weakness.

Ingestion May cause sensitisation or allergic reactions in sensitive individuals. May cause irritation.

Skin contact May cause skin sensitisation or allergic reactions in sensitive individuals. Redness. Irritating to

skin.

Eye contact Irritating to eyes.

Route of exposure Ingestion Inhalation Skin and/or eye contact

Target organs Respiratory system, lungs

Medical considerations Skin disorders and allergies.

SECTION 12: Ecological information

Ecotoxicity The product reacts with water to form a solid, insoluble reaction product which is not

biodegradable.

12.1. Toxicity

Toxicity Aquatic Chronic 3 - H412 Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not determined.

12.4. Mobility in soil

Mobility No data available.

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle

products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Empty containers or liners may retain some product residues and hence be potentially hazardous. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste

disposal legislation and any local authority requirements.

Disposal methodsDo not empty into drains. Incineration or landfill should only be considered when recycling is

not feasible. Do not reuse empty containers. No specific disposal method required.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods

(IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78

and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations Health and Safety at Work etc. Act 1974 (as amended).

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment

Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].

EH40/2005 Workplace exposure limits.

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18

December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of

Chemicals (REACH) (as amended).

Commission Regulation (EU) No 2015/830 of 28 May 2015.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as

amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by

Road.

ADN: European Agreement concerning the International Carriage of Dangerous Goods by

Inland Waterways.

RID: European Agreement concerning the International Carriage of Dangerous Goods by

Rail.

IATA: International Air Transport Association.

ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.

IMDG: International Maritime Dangerous Goods.

CAS: Chemical Abstracts Service. ATE: Acute Toxicity Estimate.

LC₅₀: Lethal Concentration to 50 % of a test population.

LD₅o: Lethal Dose to 50% of a test population (Median Lethal Dose).

EC₅o: 50% of maximal Effective Concentration.

PBT: Persistent. Bioaccumulative and Toxic substance.

vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity Carc. = Carcinogenicity Eye Irrit. = Eye irritation

Resp. Sens. = Respiratory sensitisation

Skin Irrit. = Skin irritation Skin Sens. = Skin sensitisation

STOT RE = Specific target organ toxicity-repeated exposure STOT SE = Specific target organ toxicity-single exposure

Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Classification procedures according to Regulation (EC) 1272/2008

Acute Tox. 4 - H332: STOT RE 2 - H373: STOT SE 3 - H335: Skin Irrit. 2 - H315: Eye Irrit. 2 - H319: Resp. Sens. 1 - H334: Skin Sens. 1 - H317: Carc. 2 - H351: : Calculation method.

Aquatic Chronic 3 - H412: : Calculation method.

Training advice Only trained personnel should use this material.

Issued by HS&E Manager.

Revision date 28/01/2021

Revision 2

Supersedes date 18/06/2020

SDS number 5636

Hazard statements in full H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

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.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.