

Product SG-95 B
 Revision Date 07/07/2016
 Revision 1



Safety Data Sheet (SDS)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name SG-95 B
Synonyms, Trade Names No information available.

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Identified Uses No Information Available.
Uses Advised Against No uses advised against are identified.

1.3 Details of the Supplier of the Safety Data Sheet

Supplier Renishaw plc
 Brooms Road
 Stone Business Park
 Stone, Staffordshire
 ST15 0SH
 United Kingdom
 Tel: +44 (0) 1785 285000 (during UK office hours 09:00 to 17:00 UTC).
 msds@renishaw.com

Contact Person

1.4 Emergency Telephone Number

Emergency Telephone 999 / 911 or local emergency number.

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Classification (EC 1272/2008)
 Physical and Chemical Hazards Not classified
 Human Health Acute Tox 4 - H332, Skin Irrit.2 - H315, Eye Irrit.2A - H319, Resp. Sens 1 - H334, Skin. Sens 1 - H317, Carc. 2 - H351, STOT SE 3 - H335, STOT RE 2 - H373
 Environment Not classified

2.2 Label Elements

Contains methylenediphenyl diisocyanate
 Modified diphenylmethane diisocyanate

Label in Accordance With (EC) No. 1272/2008



Signal Word Danger

Hazard Statements
 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 (respiratory) through prolonged or repeated exposure :

Inhalation.

Precautionary Statements

Prevention

P201 Obtain special instructions before use.
 P260 Do not breathe dust/fume/ gas/mist/vapours/spray.
 P280 Wear protective gloves/ protective clothing/eye protection/face protection.
 P285 In case of inadequate ventilation wear respiratory protection.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position 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.

Storage

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

2.3 Other Hazards

None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

Not applicable.

3.2 Mixtures

Name	Product Identifier	GHS Classification	%
methylenediphenyl diisocyanate	CAS-No.: 26447-40-5 EC No.: 247-714-0	Skin Irrit.2 - H315, Skin. Sens 1 - H317, Eye Irrit.2A - H319, Acute Tox 4 - H332, Resp. Sens 1 - H334, STOT SE 3 - H335, Carc. 2 - H351, STOT RE 2 - H373	30-60%
Modified diphenylmethane diisocyanate	CAS-No.: 39420-98-9 EC No.:	Skin Irrit.2 - H315, Skin. Sens 1 - H317, Eye Irrit.2A - H319, Acute Tox 4 - H332, Resp. Sens 1 - H334, STOT SE 3 - H335, STOT RE 2 - H373	30-60%

The Full Text for all Hazard Statements Are Displayed in Section 16.

Composition Comments

The data shown are in accordance with the latest EC Directives.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

General Information

Provide general first aid, rest, warmth and fresh air. As a general rule, in case of doubt or if symptoms persist, always call a doctor. Seek medical attention for all burns and eye injuries, regardless how minor they may seem. First aid personnel must be aware of own risk during rescue.

Inhalation

If this product is inhaled and symptoms occur, move the exposed person to fresh air promptly. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

Ingestion

If this product is ingested get medical attention immediately! Remove victim immediately from source of exposure. Rinse mouth thoroughly. If vomiting occurs, the head should be kept low so that stomach content doesn't enter the lungs, and is not swallowed. Keep airway clear.

Skin Contact

Provide fresh air, warmth and rest, preferably in comfortable upright sitting position. Induce vomiting only when directed by medical personnel and person is conscious. Never give anything by mouth to an unconscious person.

Eye Contact

Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. If necessary immediately remove product from skin with a clean cloth - avoid contaminating unaffected areas. Get medical attention promptly if symptoms occur after washing.

Immediately flush eyes thoroughly with plenty of water for up to 15 minutes holding eyelids apart. Remove contact lenses if present and easy to do so. Continue rinsing and seek medical attention. Avoid contaminating unaffected eye.

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	Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause damage to respiratory system through prolonged or repeated exposure by inhalation.
Ingestion	May cause digestive tract irritation, pain or vomiting.
Skin Contact	Causes skin irritation. May cause an allergic skin reaction.
Eye Contact	Causes serious eye irritation.

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

Notes to the Physician	Treat symptomatically.
-------------------------------	------------------------

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Extinguishing Media	Use fire-extinguishing media appropriate for surrounding materials. Carbon dioxide, foam, fire extinguishing powder, dry sand.
Unsuitable Extinguishing Media	Do not use water jet as an extinguisher.

5.2 Special Hazards Arising From the Substance or Mixture

Hazardous Combustion Products	In case of fire, toxic gases such as carbon monoxide may be formed. In the event of fire and/or explosion do not breathe fumes.
Unusual Fire & Explosion Hazards	No unusual fire or explosion hazards noted.
Specific Hazards	Floors may become slippery, avoid falls.

5.3 Advice for Firefighters

Special Fire Fighting Procedures	If possible, fight fire from protected position. Ventilate closed spaces before entering them. Keep up-wind to avoid fumes. Avoid breathing fire vapours. Containers close to fire should be removed immediately or cooled with water if safe to do so. For initial fire, use dry chemical, carbon dioxide or dry sand. In case of a massive fire, use foam extinguisher. After fire is extinguished, neutralize wet isocyanate. Take measures to avoid the spill of the products or chemicals to rivers or drains due to water-discharge from fire fighting. For neutralizing agent: see section 6.2.
Protective Equipment for Firefighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 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. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation. In case of inadequate ventilation, use respiratory protection. Do not smoke, eat or drink while using this product. Eliminate all sources of ignition. Wash hands after use. Read and follow manufacturer's recommendations. Do not touch or walk through spilled material. If necessary evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Avoid prolonged or repeated exposure.
For Emergency Responders	Follow safe handling advice and personal protective equipment recommendations for normal use of product.

6.2 Environmental Precautions

Environmental Precautions	Do not discharge into drains, water courses or onto the ground.
----------------------------------	---

6.3 Methods and Material for Containment and Cleaning Up

Spill Clean Up Methods	Stop leak if possible without risk. DO NOT touch spilled material! When dealing with a spillage, please consult the section relating to suitable protective measures. Wear necessary protective equipment. Ventilate and evacuate the area. Eliminate all sources of ignition.
-------------------------------	--

Wear protective clothing, goggles and respirator if ventilation is not adequate. Absorb spillage with non-combustible, absorbent material - sand. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labelled container. In case of a large scale of spill, dyke area with sand to stop the spill spreading. Neutralize by dispersing neutralizing agent and absorb with sand. Wash work area with water. Use non sparking tools or equipment for clean up. Example of neutralizing agent: water/sodium carbonate/liquid detergent (parts by weight)=90-95 / 5-10 / 0.2-0.5. Wash thoroughly after dealing with a spillage.

6.4 Reference to Other Sections

Reference to Other Sections See section 1 for emergency contact. For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Handling Keep away from heat, sparks and open flame. Static electricity and formation of sparks must be prevented. Do not eat, drink or smoke when using the product. Do not use contact lenses. Avoid contact with skin and eyes. Avoid inhalation of vapours. Avoid prolonged or repeated contact. Obtain special instructions before use. Provide good ventilation Ground equipment and use explosion-proof electrical equipment. Use spark-free tools. Use proper personal protection when handling (refer to Section 8). Read and follow manufacturer's recommendations. Do not mix with other chemicals.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Storage Precautions Keep locked up and out of reach of children. Keep away from heat, sparks, direct sunlight and open flame. Keep separate from food, feedstuffs, fertilisers and other sensitive material. Store in tightly closed original container in a dry, cool and well-ventilated place. Avoid contact with water, amine compounds and polyol reacting with isocyanate. After opening containers, replace with dry nitrogen or dry air and tightly seal the container to prevent leaks. To avoid static electricity, ground equipment.

Storage Class Hazardous material storage.

7.3 Specific End Use(s)

Specific End Use(s) The identified uses for this product are detailed in Section 1.

Usage Description Use only according to directions. Replace and tighten cap after use. Avoid static build up by suitable earthing arrangements.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Component	STD	TWA (8 Hrs)		STEL (15mins)		Notes
methylenediphenyl diisocyanate	NIOSH	0.005ppm	0.05mg/m3	0.02ppm	0.2mg/m3	

Ingredient Comments No information available.

8.2 Exposure Controls

Protective Equipment



Engineering Measures Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Use explosion-proof equipment.

Respiratory Equipment Where risk assessment shows air-purifying respirators are appropriate use a full-face

Hand Protection	respirator and suitable organic respirator cartridges as a backup to engineering controls. (Suggested type: N95 - consult with manufacturer.) If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as CEN (EU). Use suitable organic solvent resistant gloves if there is a risk of skin contact. Consult manufacturer for specific advice. Selection of the glove material depends on consideration of the penetration times, rates of diffusion and degradation, and concentration specific to the workplace. Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374) is recommended. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.
Eye Protection	Wear safety goggles or face shield to prevent any possibility of eye contact. Use equipment for eye protection tested and approved under appropriate government standards such as EN 166(EU).
Other Protection	Wear appropriate clothing to prevent any possibility of skin contact. Chemical resistant anti-static work clothes and safety shoes are recommended. Select appropriate protective clothing based on chemical resistance data and an assessment of local exposure potential. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Hygiene Measures	Wash promptly if skin becomes contaminated. Handle in accordance with good industrial hygiene and safety practice. DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet.
Process Conditions	Use only according to directions. Ensure that eye flushing systems and safety showers are located close by in the work place. Keep container tightly sealed when not in use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

Appearance	Liquid.
Colour	Light yellow.
Odour	Weak odour.
Odour Threshold - Lower	No information available.
Odour Threshold - Upper	No information available.
pH-Value, Conc. Solution	No information available.
pH-Value, Diluted Solution	No information available.
Melting Point	No information available.
Initial Boiling Point and Boiling Range	No information available.
Flash Point	216 °C
Evaporation Rate	No information available.
Flammability State	No information available.
Flammability Limit - Lower(%)	No information available.
Flammability Limit - Upper(%)	No information available.
Vapour Pressure	No information available.
Vapour Density (air=1)	No information available.
Relative Density	1.19 at 25 °C
Bulk Density	No information available.
Solubility	Soluble in organic solvents.
Decomposition Temperature	No information available.

Partition Coefficient; n-Octanol/Water	No information available.
Auto Ignition Temperature (°C)	No information available.
Viscosity	No information available.
Explosive Properties	No information available.
Oxidising Properties	No information available.

9.2 Other Information

Molecular Weight	No information available.
Volatile Organic Compound	No information available.
Other Information	None noted.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Reactivity	Stable under recommended transport and storage conditions and under recommended use.
-------------------	--

10.2 Chemical Stability

Stability	Relatively stable when stored in a cool and dark place.
------------------	---

10.3 Possibility of Hazardous Reactions

Hazardous Reactions	Reacts with active hydrogen compounds such as water, alcohol and amine and generates heat. If mixed with water, carbon dioxide is generated which may cause containers to rupture or explode. Contact with basic substances or organic metallic compounds, may generate heat due to polymerization.
Hazardous Polymerisation	Contact with basic substances or organic metallic compounds, may generate heat due to polymerization.
Polymerisation Description	Unknown.

10.4 Conditions to Avoid

Conditions to Avoid	Fire and high temperature.
----------------------------	----------------------------

10.5 Incompatible Materials

Materials to Avoid	Avoid contact with water, alcohol, amines, basic substance or organic metallic compounds.
---------------------------	---

10.6 Hazardous Decomposition Products

Hazardous Decomposition Products	When heated, vapours/gases hazardous to health may be formed. Combustion produces toxic gases such as carbon monoxide.
---	--

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Toxicological Information	No toxicological information for the overall finished product.
Acute Toxicity (Oral LD50)	No information available.
Acute Toxicity (Dermal LD50)	No information available.
Acute Toxicity (Inhalation LD50)	No information available.
Serious Eye Damage/Irritation	Causes serious eye irritation.
Skin Corrosion/Irritation	Causes skin irritation.
Respiratory Sensitisation	No information available.

Skin Sensitisation	No information available.
Germ Cell Mutagenicity	
Genotoxicity - In Vitro	
Genotoxicity - In Vivo	
Carcinogenicity	No information available.
Specific Target Organ Toxicity - Single Exposure:	
STOT - Single Exposure	Category 3 -Respiratory tract irritation.
Specific Target Organ Toxicity - Repeated Exposure:	
STOT - Repeated Exposure	Category 1 - respiratory system.
Inhalation	Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause damage to respiratory system through prolonged or repeated exposure by inhalation.
Ingestion	May cause digestive tract irritation, pain or vomiting.
Skin Contact	Causes skin irritation. May cause an allergic skin reaction.
Eye Contact	Causes serious eye irritation.
Waste Management	When handling waste, consideration should be made to the safety precautions applying to handling of the product Curing in large quantities or under improper conditions may cause fire. Dispose of without curing and mixing with other materials. Do not discharge wastewater used for washing of container and equipment into ground or drain without treatment.
Routes of Entry	No information available.
Target Organs	Eyes, skin, digestive system, respiratory system.
Aspiration Hazards:	No information available.
Reproductive Toxicity:	No information available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Ecotoxicity	No Ecological information on the finished product.
Eco Toxicological Information	No information.

12.2 Persistence and Degradability

Degradability	No information available.
Biological Oxygen Demand	No information available.
Chemical Oxygen Demand	No information available.

12.3 Bioaccumulative Potential

Bioaccumulative Potential	No data available on bioaccumulation.
Bioaccumulation Factor	
Partition Coefficient; n-Octanol/Water	No information available.

12.4 Mobility in Soil

Mobility	No information available.
-----------------	---------------------------

12.5 Results of PBT and vPvB Assessment

Results of PBT and vPvB Assessment	No information available.
---	---------------------------

12.6 Other Adverse Effects

Other Adverse Effects	No information available.
------------------------------	---------------------------

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Management	When handling waste, consideration should be made to the safety precautions applying to handling of the product Curing in large quantities or under improper conditions may cause fire. Dispose of without curing and mixing with other materials. Do not discharge wastewater used for washing of container and equipment into ground or drain without treatment.
-------------------------	---

13.1 Waste Treatment Methods

Disposal Methods	Dispose of in accordance with national and local regulations for special waste via an appropriately licensed waste contractor.
-------------------------	--

SECTION 14: TRANSPORT INFORMATION**14.1 UN Number**

UN No. (ADR)	Not applicable.
UN No. (IMDG)	Not applicable.
UN No. (IATA)	Not applicable.

14.2 UN Proper Shipping Name

ADR Proper Shipping Name	Not applicable.
IMDG Proper Shipping Name	Not applicable.
IATA Proper Shipping Name	Not applicable.

14.3 Transport Hazard Class(es)

ADR Class	Not applicable.
IMDG Class	Not applicable.
IATA Class	Not applicable.

Transport Labels	Not applicable
-------------------------	----------------

14.4 Packing Group

ADR/RID/ADN Packing Group	Not applicable.
IMDG Packing Group	Not applicable.
IATA Packing Group	Not applicable.

14.5 Environmental Hazards

ADR	No
IMDG	No
IATA	No

14.6 Special Precautions for User

EMS	Not applicable.
Emergency Action Code	Not applicable.
Hazard No. (ADR)	Not applicable.
Tunnel Restriction Code	Not applicable.

14.7 Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION**15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture**

EU Legislation	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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments. The UN Globally Harmonized System (GHS) Safety Data Sheet format (Annex IV) is implemented as Annex II of REACH EU No 453/2010 of 20th May 2010 amending regulation (EC) No 1907/2006.
Approved Code of Practice	Workplace Exposure Limits Guidance Note EH40/2005.
Chemical Safety Assessment	No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

General Information	This Safety Data Sheet is in accordance with Reach Regulation (EC) No 453/2010.
Revision Comments	This is a first issue.
Revision Date	07/07/2016
Revision	1
Safety Data Sheet Status	Approved.

Hazard Statements In Full

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 [*].

Disclaimer

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.