

Safety Data Sheet

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1. Identification of the substance/preparation and of the company/undertaking				
Product name:	Damping layer DG-U6, Component B			
Chemical name:	Polyisocyanate based on diphenylmethane diisocyanate			
Material Uses/Applications:	Binder for coating materials or adhesives			
Supplier:	Swedac, Swedish Acoustic Products Innovation AB Storås Industrigata 424 69 Angered Telephone: +46 317441890 Fax: +46 31 229960			
2. Composition/information on ingredients				
Substance/preparation	CAS-	Konc. (wt.-%)	Hazard Symbol	R-Phrases
4,4'-diphenylmethane- diisocyanate isomers and homologues	101-68-8 / 5873-54-1 / 2536-05-2	> 99,5	Xn	20-36/37/38-42/43
3. Hazards identification				
Human health hazards:	Harmful by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitisation by inhalation and skin contact.			
4. First-aid measures				
<u>Effects and symptoms</u>				
Inhalation: Ingestion:	In case of irritation of the respiratory tract or swallowing, consult a doctor.			
Skin contact:	In the event of contact with the skin, preferably wash with a cleanser based on polyethylene glycol or with plenty of warm water and soap. If skin reactions occur, contact a physician.			
Eye contact :	If the product contacts the eyes, rinse carefully and thoroughly with water and seek medical advice.			

5. Fire-fighting measures	
Extinguishing media:	CO2, foam, dry powder; for larger fires, water spray should be used.
Special fire-fighting procedures:	Combustible. Dike fire control water for later disposal. Do not allow contaminated extinguishing water to enter the soil, ground water or surface waters.
Hazardous thermal (de)composition products:	In the event of fire, carbon monoxide, nitrogen oxides, isocyanate vapour, and traces of hydrogen cyanide may be released.
Protection of fire-fighters :	Firemen must wear self-contained breathing apparatus.
6. Accidental release measures	
Environmental precautions :	Prevent dispersion. Do not allow to enter sewage system.
Methods for cleaning up:	Remove mechanically; cover the remainder with wet, absorbent material (e.g. sawdust, chemical binder based on calcium silicate hydrate, sand). After approx. one hour transfer to waste container and do not seal (evolution of CO2!). Keep damp in a safe ventilated area for several days. For further disposal measures see chapter 13.
7. Handling and storage	
Handling :	Keep container tightly closed and dry. VCI Storage Class: 10 (VCI = German Association of the Chemical Industry) Ensure adequate ventilation or exhaust ventilation in the working area. Exhaust ventilation necessary if product is sprayed. Avoid contact with skin and eyes. In all areas where MDI aerosols and/or vapour concentrations are produced, exhaust ventilation must be provided in such a way that the MEL is not exceeded. The air should be drawn away from the personnel handling the product.
Packaging materials:	Suitable: Keep in sealable containers.
8. Exposure controls/personal protection	
Hygiene measures:	Keep away from foodstuffs, drinks and tobacco. Wash hands before breaks and at end of work. Keep working clothes separate. Take off immediately all contaminated clothing.
Personal protective equipment:	
Respiratory system :	Respiratory protection required in insufficiently ventilated working areas and during spraying. An air-fed mask, or for short periods of work, a combination of charcoal filter and particulate filter is

	recommended.
Skin and body :	<p>Wear suitable protective clothing, protective gloves and protective goggles/mask.</p> <p>Suitable materials for safety gloves; DIN EN 374–3: Polychloroprene – CR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 480\text{min}$. Nitrile rubber – NBR: thickness $\geq 0,35\text{mm}$; breakthrough time $\geq 480\text{min}$. Butyl rubber – IIR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 480\text{min}$. Fluorinated rubber – FKM: thickness $\geq 0,4\text{mm}$; breakthrough time $\geq 480\text{min}$. Polyvinyl chloride – PVC: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 480\text{min}$. Recommendation: contaminated gloves should be disposed of.</p> <p>In case of hypersensitivity of the respiratory tract (e.g. asthmatics and those who suffer from chronic bronchitis) it is inadvisable to work with the product.</p>
Eyes :	Safety glasses.
9. Physical and chemical properties:	
Physical state .:	Liquid
Colour .:	Dark brown
Odour :	Earthy, musty
Specific gravity:	ca 1,24 g/cm ³
Setting/Melting point :	< 0 °C
Vapour pressure :	<0,00001 mbar 20 °C
Autoignition temperature:	> 400 °C
Solubility in water :	Negligible, reacts
10. Stability and reactivity	
Stability:	Hazardous decomposition products: No hazardous decomposition products when stored and handled correctly.
Conditions to avoid:	Hazardous reactions: Exothermic reaction with amines and alcohols; reacts with water forming CO ₂ ; in closed containers, risk of bursting owing to increase of pressure.

11. Toxicological information	
Acute toxicity – Oral:	LD50 oral, rat: more than 5000 mg/kg
Acute toxicity – Dermal:	LD50 dermal, rat: more than 5000 mg/kg, 24 hours of exposure
Toxicological studies of diphenylmethane–diisocyanate:	
<p>Skin and mucous membrane compatibility, rabbit: Skin 24 hours exposure – no findings</p> <p>Eyes – moderate irritation of mucous membrane (test: Institute for Toxicology of Bayer AG)</p> <p>Long–term inhalation study of polymeric diphenylmethane isocyanate (PMDI) carried out using mechanically produced, inhalable PMDI aerosols. Aerodynamic diameter: 95 % below 5 µm Concentrations: 0,2 ; 1,0 and 6,0 mg/m³ Animal groups: 120 rats in each (60 female, 60 male) Results after clinical and histopathological examination of the animals: 0,2 mg aerosols/m³: No irritation of the respiratory tract or lungs – "no effect level" (NOEL). 1,0 mg aerosols/m³: Slight irritation of and inflammatory changes to the nose, respiratory tract and lungs. No lung tumours. 6,0 mg aerosols/m³: More severe irritation of and chronic inflammatory changes to the nose, respiratory tract and lungs.</p> <p>Accumulation of a yellow substance in the lungs. 8 benign (statistically increased) and 1 malignant (statistically insignificant) lung tumours were found.</p> <p>The overall increased incidence of lung tumours only in the group which received the highest concentration is closely attributed to the chronic irritation of and the inflammatory changes to the respiratory organs and to the accumulation of the yellow substance in the lungs of the animals. Special properties/effects: Over–exposure, especially when spraying coatings containing isocyanate without the necessary precautions, entails the risk of concentration–dependent irritating effects on eyes, nose, throat, and respiratory tract.</p> <p>Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible. Hypersensitive persons may suffer from these effects even at low isocyanate concentrations, including concentrations below the UK Maximum Exposure Limit (MEL). Prolonged contact with the skin may cause tanning and irritant effects.</p>	
12. Ecological information	
Generally:	<p>Prevent discharge to the sanitary sewer or the environment Do not allow to escape into waterways, waste water or soil. The product reacts with water at the interface forming CO₂ and a solid insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by water–soluble solvents.</p>

	<p>Data on diphenylmethane diisocyanate, isomers and homologues: Biodegradability: 0 % after 28 days (respirometer test) Acute fish toxicity: LC0 = >1000 mg/l Test species: Brachydanio rerio Duration of test: 96 h Toxicity for Daphnia: EC50 = >1000 mg/l Duration of test: 24 h Acute bacteria toxicity: EC50 = >100 mg/l Tested on activated sludge microorganisms. Duration of test: 3 h</p>
13. Disposal considerations	
Methods of disposal:	<p>The relevant EC Directives and local, regional and national regulations must be complied with. Waste: May be incinerated in a suitable facility provided local regulations are observed. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used. After final product withdrawal, all residues must be removed from containers (drip-free, powder-free or paste-free). Once the product residues adhering to the walls of the containers have been rendered harmless, the product and hazard labels must be invalidated. Containers must be recycled in compliance with national legislation and environmental regulations.</p>
14. Transport information	
<p>GGVSee/IMDG Code: -- UN No.: -- EmS: -- PG: -- MPO: -- GGVSE: Class -- PG: -- RID/ADR: Class -- PG: -- ADNR: Class -- PG: -- Cat -- ICAO/IATA-DGR: not restr. Declaration for land shipment: -- Declaration for sea shipment: -- Declaration for shipment by air: -- Other information: Not dangerous cargo. Irritating to skin and mucous membranes. Keep dry. Keep away from foodstuffs, acids and alkalis.</p>	
15. Regulatory information	
EU Regulations EU Classification	<p>Labelling as required by the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP3), in accordance with EC Directives:</p> <p>Symbol: Xn, hazard description: harmful Contains: diphenylmethane diisocyanate (mixture of isomers) R 20: Harmful by inhalation. R 36/37/38: Irritating to eyes, respiratory system and skin. R 42/43: May cause sensitisation by inhalation and skin contact. S 23: Do not breathe vapour/spray.</p>

	<p>S 36/37: Wear suitable protective clothing and gloves. S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).</p> <p>TRGS 905–classification: diphenylmethane–4,4'–diisocyanate CAS No.: 101–68–8 (in the form of respirable aerosols, measured as the alveolar aerosol content) carcinogenic, category 3 (Deviation from the legal classification as per Annex I of Directive 67/548/EEC.) Any existing national regulations on the handling of isocyanates must be observed.</p> <p>Not subject to the German Regulation on Flammable Liquids (VbF). Airborne emissions must be controlled within local and national limits, in accordance with the appropriate legislation. diphenylmethane–4,4'–diisocyanate = (own classification) Airborne emissions must be controlled within local and national limits, in accordance with the appropriate legislation. diphenylmethane–4,4'–diisocyanate = diphenylmethane–2,4'–diisocyanate = Water pollution class (WGK): 1 – slightly hazardous to water WGK = Classification in accordance with the German Water Resources Act</p>
16. Other information	
<p>All components of this product are listed in the European Inventory of Existing Commercial Substances (EINECS) under the provisions laid down in the corresponding EC–Directive. Swiss law of poison: class of poison 3; BAG–T–No. 614463. Text of all R phrases referred to in Chapters 2 and 3: R 20: Harmful by inhalation. R 36: Irritating to the eyes. R 37: Irritating to respiratory system. R 38: Irritating to the skin. R 42: May cause sensitisation by inhalation. R 43: May cause sensitisation by skin contact. All air and water emissions must be controlled in accordance with relevant local and national legislation.</p> <p>The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance.</p>	
Other notes:	<ul style="list-style-type: none"> a) Never work with Damping layer DG-U6 at temperatures above 25 °C. b) If possible, add Component B in a well ventilated area. c) Place the empty tins of Component B in plastic bags for a clean transport.