



SAFETY DATA SHEET

Page 1 of 5

Garage Floor Coating Kit Hardener

Revision 0
Revision date

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Product name Garage Floor Coating Kit Hardener

Company Resinfloorcoatingsuk.com Ltd
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2 HAZARDS IDENTIFICATION.

Main hazards Harmful by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitisation by inhalation and skin contact

3 . COMPOSITION / INFORMATION ON INGREDIENTS.

Hazardous ingredients

	Conc.	CAS	EINECS	Symbols/Risk phrases
Diphenylmethane-4,4'-di-isocyanate	60-70%	101-68-8	202-966-0	Xn; R20 Xi; R36/37/38 R42/43
Diphenylmethane-2,4'-di-isocyanate	20-30%	5873-54-1	227-534-9	Xn; R20 Xi; R36/37/38 R42/43

4. FIRST AID MEASURES

Skin contact Remove contaminated clothing. After contact with skin, wash immediately with plenty of warm soapy water. If symptoms develop, obtain medical attention. Contaminated clothing should be thoroughly cleaned. An MDI study has demonstrated that a polyglycol-based skin

Eye contact Immediately irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 10 minutes. Obtain immediate medical attention.

Inhalation Remove patient from exposure, keep warm and at rest. Obtain immediate medical attention. Treatment is symptomatic for primary irritation or bronchospasm. If breathing is laboured, oxygen should be administered by qualified personnel. Apply artificial respiration if

Ingestion Do not induce vomiting. Do not swallow. Provided the patient is conscious, wash out mouth with water. Obtain immediate medical attention.

General information Symptomatic treatment and supportive therapy as indicated. Following severed exposure the patient should be kept under medical review for at least 48 hours/.

Garage Floor Coating Kit Hardener

Revision 0
Revision date

5. FIRE FIGHTING MEASURES

Suitable extinguishing media	Foam, CO2 or dry powder. Water may be used if no other available and then in copious quantities. Reaction between water and hot isocyanates may be vigorous. Prevent washings from entering water courses, keep fire exposed containers cool by spraying with
Unusual fire/explosion Hazards	Not classified as flammable. If involved in a fire, it may omit noxious and toxic fumes. Containers may burst if overheated. Due to reaction with water producing CO2-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Combustion products may include: carbon monoxide, carbon dioxide, nitrogen oxides,
Protection of fire-fighters.	Suitable respiratory protection with full face piece and positive air supply. PVC boots, gloves, safety helmet and protective clothing should be worn.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Splash goggles. Full suit. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product.
Environmental precautions and cleanup methods	Evacuate the area. Keep upwind to avoid inhalation of vapours. Clean-up should only be performed by trained personnel. People dealing with major spillages should wear full protective clothing including respiratory protection. Prevent further leakage, spillage or entry into drains. Absorb spillages onto sand, earth or any suitable adsorbent materials. Shovel into open-top drums for further decontamination. Wash the spillage area with water. Test atmosphere for MDI vapour.

7. HANDLING AND STORAGE

Handling	Do not breathe vapour/spray. Avoid contact with skin and eyes. Atmospheric concentrations should be minimised and kept as low as reasonably practicable below the occupational exposure limit. The efficiency of the ventilation system must be monitored regularly because of the possibility of blockage. When the product is sprayed or heated, suitable respiratory protection equipment with positive air supply may be required. Keep equipment clean. A basic essential in sampling, handling and storage is the prevention of contact with water.
Storage	Keep containers properly sealed and store indoors in a well ventilated area. Keep away from frost. Keep away from moisture. If a container is contaminated, do not reseal it. Due to reaction with water producing CO2-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Unsuitable containers: Copper, copper alloy and

Garage Floor Coating Kit Hardener

Revision 0
Revision date

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory protection	Suitable respiratory equipment with positive air supply should be used in cases of insufficient ventilation or where operational procedures demand it.
Hand protection	The following protective materials are recommended: neoprenenitrile butadiene rubberbutyl rubberPVC Heavy duty. laminated polyethyleneThin disposable gloves should be avoided for repeated or long term use. Protective gloves should be worn when handling freshly made polyurethane products to avoid contact with trace residual materials which may be hazardous in contact with skin.
Eye protection	Chemical safety glasses. Full face shield if splashing is possible.
Skin and Body	Overall (preferably heavy cotton) or Tyvek-Pro Tech 'C', Tyvek-Pro 'F' disposable coverall. Contaminated clothing should be thoroughly cleaned before re-use.
Further information	Wear suitable protective clothing, gloves and eye/face protection. Atmospheric concentrations should be minimised and kept as low as reasonably practicable below the occupational exposure limit. MDI can only be smelled if the occupational exposure limit has been exceeded considerably. Medical supervision of all employees who handle or come in contact with respiratory sensitisers is recommended. Personnel with a history of asthma-type conditions, bronchitis or skin sensitisation conditions should not work with MDI based products. Sensitised individuals should be removed from any further exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Description	Liquid.
Colour	Brown.
Odour	Slight.
Boiling point	> 300°C
Flash point	220°C
Water solubility	insoluble in water.

10. STABILITY AND REACTIVITY

Stability	Stable at room temperature. Reaction with water (moisture) produces CO ₂ -gas. Exothermic reaction with materials containing active hydrogen groups. The reaction becomes progressively more vigorous and can be violent at higher temperatures if the miscibility of the reaction partners is good or is supported by stirring or by the presence of solvents. MDI is soluble with, and heavier than water and sinks to the bottom but reacts slowly at the interface. A solid water-insoluble layer of polyurea is formed at the interface by liberating carbon dioxide gas.
Conditions to avoid	Avoid high temperatures.
Materials to avoid	Water, alcohols, amines, bases, and acids.
Hazardous decomposition products	Unlikely under normal industrial use.

Garage Floor Coating Kit Hardener

Revision 0
Revision date

11. TOXICOLOGICAL INFORMATION

Sensitization	Moderate irritant. Repeated and/or prolonged contact may cause skin sensitisation. Animal studies have shown that respiratory sensitisation can be induced by skin contact with known respiratory sensitisers including diisocyanates. These results emphasize the need for protective clothing including gloves to be worn at all times when handling these chemicals
Inhalation	This product is a respiratory irritant and potential respiratory sensitiser: repeated inhalation of vapour or aerosol at levels above the occupational exposure limit could cause respiratory sensitisation. Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty in breathing. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitised individuals.
Ingestion	Low oral toxicity. Ingestion may cause irritation of the gastrointestinal tract.
Eye irritation	The vapour, aerosol and liquid are irritant.
Chronic toxicity	Rats have been exposed for two years to a respirable aerosol of polymeric MDI which resulted in chronic pulmonary irritation at high concentrations. Only at the top level (6 mg/m ³), there was a significant incidence of a benign tumour of the lung (adenoma) and one malignant tumour (adenocarcinoma). There were no lung tumours at 1 mg/m ³ and no effects at 0.2 mg/m ³ . Overall, the tumour incidence, both benign and malignant, and the number of animals with the tumours were not different from controls. The increased incidence of lung tumours is associated with prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung, which occurred throughout the study. In the absence of prolonged exposure to high concentration leading to chronic irritation and lung damage. It is highly unlikely that tumour formation will occur. Industrial experience in humans has not shown any links between MDI exposure and cancer developments. There are reports that chronic exposure by inhalation may result in permanent decreases in lung function. No birth defects were seen in two independent animal (rat) studies. Fetotoxicity was observed at doses that were extremely toxic (including lethal) to the mother. Fetotoxicity was not observed at doses that were not maternally toxic. The doses used in

12. ECOLOGICAL INFORMATION

Ecotoxicity	By comparison with an analogous product, the following values are anticipated. The measured ecotoxicity is that of the hydrolysed product, generally under conditions maximising production of soluble species. Even so, the observed ecotoxicity is low/very low. A pond study showed gross contamination caused no significant toxic effects on a wide variety of flora in all trophic levels (including fish), no detectable diaminodiphenylmethane
Mobility	By considering the production and use of the substance, it is unlikely that significant environmental exposure in the air or water will arise.
Degradability	Immiscible with water, but will react with water to produce inert and non-biodegradable solids. Conversion to soluble products, including diamino-diphenylmethane (MDA) is very low under the optimal laboratory conditions of good dispersion and low concentration. In air, the predominant degradation process is predicted to be a relatively rapid OH radical attack,

Garage Floor Coating Kit Hardener

Revision 0
Revision date

13. DISPOSAL CONSIDERATIONS

Disposal methods	The generation of waste should be avoided or minimised wherever possible. Untreated material is not suitable for disposal. Waste even small quantities should never be poured down drains, sewers or water courses. Small quantities and empty drums - pretreat to neutralise prior to disposal. Large quantities - incinerate under approved controlled conditions, using incinerators suitable for the disposal of noxious chemical waste. Empty drums should be decontaminated and either passed to an approved drum reconditioner or
European Waste Catalogue (EWC)	The relevant EU directives and local, regional and national regulations must be complied with. It is among the tasks of the end user to assign the waste to waste codes specific to industrial sectors and processes according to the European Waste catalogue. It is recommended that the details be agreed with the waste disposer responsible.

14. TRANSPORT INFORMATION

ADR/RID	Not regulated.
IMDG	Not regulated.
IATA	Not regulated.

15. REGULATORY INFORMATION

Symbols	Xn - Harmful 
Risk phrases	R20 - Harmful by inhalation. R36/37/38 - Irritating to eyes, respiratory system and skin.
Safety phrases	R42/43 - May cause sensitisation by inhalation and skin contact. S22 - Do not breathe dust. S23 - Do not breathe gas/fumes/vapour/spray. S24 - Avoid contact with skin. S37 - Wear suitable gloves. S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

16. OTHER INFORMATION

Text of risk phrases in Section 3.	R20 - Harmful by inhalation. R36/37/38 - Irritating to eyes, respiratory system and skin. R42/43 - May cause sensitisation by inhalation and skin contact.
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