



PVCO CITY PVC TILE CLEANER

IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Chemical character and proposed application: polyurethane adhesive, high strength, for construction and manufacture of cold-room panels

COMPOSITION/INFORMATION ABOUT CHEMICAL INGREDIENTS

Substances presenting a health hazard within the meaning of the Chemical Regulations '93

CAS-NR	NAME OF SUBSTANCE	CONC. % W/W	SYMBOL	R-PHRASES
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PART A
NON- HAZARDOUS

PART B 9016-87-9	Diphenylmethane diisocyanate	>= 60 Xn	R 20 - 36/37/38- 42
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Index No: 615-005-00-9

For full text of the R-phrases see Section 15 and 16

IDENTIFICATION OF HAZARDS

Type of danger: Harmful by inhalation

Special information for humans and environment: The product contains isocyanates

Labelling:



FIRST AID

General information:

In case of doubt, or when symptoms persist, seek medical attention Never give anything by mouth to an unconscious person.

Inhalation:

Remove the patient to fresh air.

Skin contact:

Wash with soap and water. A skin-cleaner may be used. Do NOT use solvents or thinners.

Eye contact:

Contact lenses should be removed. Irrigate copiously with clean, fresh water for at least 10 minutes holding the eyelids apart, seek medical advice.

Ingestion:

If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

FIRE FIGHTING MEASURES

Extinguishing media: alcohol resistant foam, CO₂-powder, water-spray

Not to be used: no restrictions

Particular danger caused by the product or its smoke after case of fire:

Fire will produce dense black smoke, containing hazardous products of Carbon Monoxide, Nitrogen Oxide, Isocyanate vapour and traces of Hydrogen Cyanide is possible. These products may be a hazard to health; firemen have to wear self-contained breathing apparatus.

Particular personal protection:

Appropriate self-contained breathing apparatus may be required. Cool closed containers exposed to fire with water-spray.

ACCIDENTAL RELEASE MEASURES

Personal measures: Avoid contact with skin.

Protection of the environment: The product cannot be decomposed by biodegradation. Consequently it is highly recommended to dispose product with due care.

Procedure of cleaning and removing: Contain and collect the product mechanically. Clean preferably with a detergent, avoid the use of solvents. Disposal see Section 13

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ACCIDENTAL RELEASE MEASURES

Handling:

Indication for secure handling: not applicable Indication for fire/explosion-protection not applicable

Storage:

Demands for spaces of storage and vessels: Store in a dry, well ventilated place away from heat and direct sunlight at temperature not above 50 °C and not below 0 °C.

Store separately from oxidizing agents and strongly alkaline and acidic materials. Store only in containers of origin. (or containers which are similar) Observe the label precautions. Store in a dry, well-ventilated place not above 50°C, protected against heat and direct sunlight.

Storage Class: not applicable contact with skin.

Protection of the environment: The product cannot be decomposed by biodegradation. Consequently it is highly recommended to dispose product with due care. Procedure of cleaning and removing: Contain and collect the product mechanically. Clean preferably with a detergent, avoid the use of solvents. Disposal see Section 13

LIMITS OF EXPOSURE AND PERSONAL PROTECTION MEASURES

Technical safety measures:

No specific precautions required. It is sufficient to respect the general precautions to avoid hazards. (No contact with mouth and skin)

Personal protection:

Respirator required in insufficiently ventilated areas. 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.

Hand protection:

Wear gloves - advice should be sought from glove suppliers.

Barrier creams may help to protect exposed areas of the skin. (They are not substitutes for physical protection do not apply them after exposure)

Eye protection: not applicable Skin protection:

Suitable working overalls.

PHYSICAL AND CHEMICAL PROPERTIES

Form: liquid
Colour: dark brown
Smell: musty relatively odourless

Flash point:	>200	°C	DIN 51758
Auto ignition temperature:	>400	°C	DIN 51794
Viscosity at 23 °C:	120		
Brookfield Density at 23 °C:	1.22	g/ml	DIN 53217
Solubility in water:	not soluble: reactive - foams on contact.		
PH-Value at 20°C:	n.a.		
Solubility in fat / solvents:	soluble at 20°C		

STABILITY AND REACTIVITY

Conditions:

Stable under recommended storage and handling conditions. (See Sect. 7)

Conditions and substances to avoid:

Avoid high temperatures (above 40 °C). Do not bring into contact with oxidizing agents or strongly alkaline or acidic materials.

Dangerous substances of decomposition:

In a fire or at high temperatures hazardous decomposition products such as CO₂, CO, smoke, oxides of nitrogen or sulphur may be produced.

TOXICOLOGICAL INFORMATION

Acute toxicity:

LD₅₀ oral, rat: more than 15 000 mg /kg

LC₅₀ inhalation, rat: approx. 370 mg as aerosol / m³, 4 h of exposure. Concentration of the saturated vapour of 4,4-MDI at 25°C: 0,09 mg / m³

Long term inhalation study of polymeric diphenylmethane isocyanate (PMDI) carried out using mechanically produced, inhalable PMDI aerosols.

Aerodynamic diameter	: 95% below 5 microns
Concentrations	: 0,2 ; 1,0 and 6,0 mg /m ³
Animal groups	: 120 rats in each (60 females, 60 male)

Results after clinical and histopathological examination of the animals:

0,2 mg aerosols /m ³	: No irritation of the respiratory tract or lungs - "no effect level" (NOEL)
1,0 mg aerosols /m ³	: Slight irritation of and inflammatory changes to the nose, respiratory tract and lungs. No lung tumours.
6,0 mg aerosols /m ³	: More severe irritation of and chronic inflammatory changes to the nose, respiratory tract and lungs.

Accumulation of a yellow substance in the lungs. 8 benign (statistically increased) and 1 malignant (statistically insignificant) lung tumors were found.

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 during spraying operations without the necessary precautions, entails the risk of concentration-dependant irritating effects on eyes, nose throat, and respiratory tract. Delayed appearance of the complaints and development of hyper-sensitivity (difficult breathing, coughing, and asthma) are possible.

Hypersensitive persons may suffer from these effects even at low isocyanate concentrations including concentrations below the German control limit (MAK-value). In case of longer contact with skin, tanning and irritating effects are possible.

