



Paint Stripping without Methylene Chloride

Working with paint strippers based on methylene chloride (dichloromethane) goes in line with high risk for the human health. Until today improper use of these products caused fatal accidents since the 80-ties. The necessity to wear personal protective cloths when working with these products – and especially the use of self-contained respirators – is not known in practise or is ignored.

Even more it is of importance to show alternatives. The best protection at the work place is still the use of safer products. Therefore the Trade Association of the Construction Industry recommend the use of dichloromethane-free paint strippers.

Protection when Stripping

At sites or renovation objects proper ventilation is often not possible. The personal protection is here of very high importance. The following comparison shows the

differences in the selection of protective clothing and the related cost for products with and without dichloromethane.

	<i>Dichloromethane-based Strippers</i>	<i>Dichloromethane-free Strippers</i>
<i>Eye protection</i>	If splashing is possible: goggles	If splashing is possible: goggles
<i>Gloves made from</i>	Fluoro caoutchouc	Polychloroprene, Nitrile caoutchouc
<i>Skin protection</i>	Fat free /low fat content ointment	Fat free /low fat content ointment
<i>Respiratory protection during treatment</i> - <i>by hand</i> - <i>by spraying</i>	Self-contained respirators Self-contained respirators	filter types: A1 filter types: A1-P2
<i>Protective clothing during treatment and cleaning</i>	Disposable chemical protection clothing	Disposable chemical protection clothing
<i>Cost</i>	approx. 2.750,- Euros	approx. 85,- Euros

Measurements at Workplaces

Working with dichloromethane-based paint strippers, the maximum exposure limit is generally exceeded, partly tentimes the threshold limit value. First measurements for work with dichloromethane-free paint strippers mainly showed low exposure values. But the highest values obtained were only slightly below the exposure limit (summary index for several substances; not every

substance has a threshold limit). For this reason also for work with this products breathing protection should be used. This precautionary measure leaves no room for doubt, that the hazard potential of dichloromethane-based paint strippers is orders of magnitudes higher than for the substitute products.

Practical Proceedings

When removing old coatings the following advices should be followed:

- 1) Test the coating to be removed;
- 2) Selection of removal technique:
 - ◆ Abrasion, e. g. Sand-blasting, grinding off, removal by steam
 - ◆ Thermal removal, e. g. Hot air gun
 - ◆ Alkaline stripping (coatings which react with caustic)
 - ◆ Stripping with dichloromethane-free paint strippers.

Only based on confirmed proof (including test areas) that all above methods have not been successful, it is allowed to use dichloromethane paint strippers, if necessary and comprehensive protective measures are applied – as directed by the German Technical Rules for Dangerous Substances (TRGS) 612 „Substitutes, substitution techniques and restrictions for the use of dichloromethane paint strippers.

Product-Code for Paints and Coatings

In the context of product-codes for paints and coatings, also different alkaline and paint strippers were combined in groups. For each product group a working procedure has been developed. This procedure minimizes the “paper management” in the companies and increases the level of acceptance of inter-company prevention. Six groups have been created for the available commercial paint strippers and designated with a product-code.

More information about product-codes can be found in the brochure ‚Coating materials‘ (ord. no.: 627), which is available from the Trade Association for the construction industry.

More Information:

Berufsgenossenschaft der Bauwirtschaft - GISBAU -
An der Festenburg 27 - 29
60389 Frankfurt am Main
Germany
www.gisbau.de

Which Advantages offer Dichloromethane-free Paint Strippers?

- ☺ Working only with “light” respirators and no severe working conditions for the employees
- ☺ No provisional examination according to Principle G 26
- ☺ Cost reduction in relation to personal protection equipment
- ☺ No application for an exceptional work permission as required by TRGS 612
- ☺ No release of chlorinated hydrocarbons into the environment
- ☺ Better company image through use of environmental-friendly products
- ☺ Risk minimization for the employees and neighbours
- ☺ Fullfillment of the legal obligation for the selection of products with low risk potential

Code Alkaline/Paint strippers

M-AL10	Caustic strippers, alkaline, irritant
M-AL20	Caustic strippers, alkaline, corrosive
M-AB10	Paint strippers, solvent-based, dichloromethane-free
M-AB20	Paint strippers, solvent-based, skin sensitive, dichloromethane-free
M-AB30	Paint strippers, dichloromethane-based, methanol-free
M-AB40	Paint strippers, dichloromethane-based, methanol-based

Status: June 2008

Dichloromethane-free paint strippers / Graffiti remover in Germany*

Product	Code	Company
3M Graffiti Farbentferner GR1	-	3M Deutschland GmbH, Carl-Schurz-Straße 1, 41453 Neuss
3M Graffiti Farbentferner GR2	-	3M Deutschland GmbH

Product	Code	Company
3M Graffiti Farbfentferner GR3	-	3M Deutschland GmbH
AGE Graffiti Entferner	M-AB10	Remmers Bauchemie GmbH, Postfach 1255, 49624 Lönigen
Anti-Graffiti	-	Geiger, Jahnstraße 46, 78234 Engen
BEECK ABBEIZER	M-AB20	Beeck'sche Farbwerke GmbH, Gottlieb-Daimler-Str. 4, 89150 Laichingen
Bornit-Dekontaminol (Graffitientferner)	-	Bornit-Werk Aschenborn GmbH, Reichenbacher Str. 117, 08056 Zwickau
BRENOFIX - SPEED Abbeizmittel	M-AB20	ACC beku, Postfach 1342, 67447 Haßloch
BRENOFIX-Plus Abbeizmittel	M-AB20	ACC beku
BRENOFIX-UNIVERSAL Abbeizmittel	M-AB20	ACC beku
brocolor -LACKab Graffiti	M-AB20	brocolor Lackfabrik, Postfach 11 63, 48572 Gronau
brocolor -LACKab Graffiti intensiv	M-AB20	brocolor Lackfabrik
brocolor -LACKab Graffiti porentief	-	brocolor Lackfabrik
brocolor-LACKab Entlackungsmittel	M-AB20	brocolor Lackfabrik
brocolor-LACKab Entlackungsmittel-R	-	brocolor Lackfabrik
decotric Abbeizer und Dispersionse Entferner rasant	M-AB20	Pufas Werk GmbH, Postfach 14 69, 34334 Hann. Münden
einz'a Fassadenabbeizer	M-AB20	Lackfabrik Union Aeckerle & Co, Postfach 93 0620, 21086 Hamburg
Feidal Universal-Abbeizpaste	M-AB20	Feidal Lacke + Farben GmbH, Postfach 12 0229, 47122 Duisburg
Fungosil Graffiti-Entferner		Remmers Bauchemie GmbH
Graffitientferner F (Graffitientferner)	-	Glöckner GmbH, Am Bubenpfad 1, 67065 Ludwigshafen
Grüneck 2000 Entschichter	M-AB20	Chemische Werke Kluthe GmbH, Postfach 10 1869, 69008 Heidelberg
Grüneck Optimal	M-AB20	Chemische Werke Kluthe GmbH
GUROCLEAN D60	M-AB20	GR Chemie GmbH, Schönhauser Allee 54, 10437 Berlin
GUROCLEAN D60G	M-AB20	GR Chemie GmbH, Schönhauser Allee 54, 10437 Berlin
GUROCLEAN M75	M-AB20	GR Chemie GmbH, Schönhauser Allee 54, 10437 Berlin
GUROCLEAN M75G	M-AB20	GR Chemie GmbH, Schönhauser Allee 54, 10437 Berlin
Karuwa Abbeizer Extra	M-AB20	Feidal Lacke + Farben GmbH
KEIM-Dispersionse Entferner aromatenfrei	M-AB20	Keimfarben GmbH & CO KG, Keimstr. 16, 86420 Diedorf
Kluthe EBECO-Fassadenabbeizer	M-AB20	Chemische Werke Kluthe GmbH
Kluthe Euro-Flux Abbeizer	M-AB10	Chemische Werke Kluthe GmbH
MEYER Abbeizer BA UNI	M-AB20	Meyer-Chemie, Postfach 225, 32122 Enger
MEYER Abbeizer BA UNI super	M-AB20	Meyer-Chemie
MEYER Abbeizer SB Forte	M-AB20	Meyer-Chemie
Molto Abbeizer Universal plus	M-AB20	Molto GmbH, Postfach 11 20, 35790 Löhnberg /Lahn
Öko-Fleck-Weg (Graffitientferner)	-	Glöckner GmbH
Öko-Fleck-Weg Gel (Graffitientferner)	-	Glöckner GmbH
Öko-Fleck-Weg Gel P (Graffitientferner)	-	Glöckner GmbH
6000 Osmo Abbeizer	M-AB20	Osmo Holz und Color GmbH & Co. KG, Affhüppen Esch 12, 48231 Warendorf
Parolenentferner	-	Hebau GmbH, Postfach 1308, 87517 Sonthofen
POWER CLEAN - Graffiti-Entfernungs-Gel	M-AB20	Kissler Marketing, Kleiner Weg 17, 97877 Wertheim
POWER CLEAN - Graffiti-Entfernungs-Liquid	M-AB20	Kissler Marketing
POWER CLEAN Farb-Ex Soft "Liquid"	M-AB10	Kissler Marketing
Scheidel – macs Asur Entlacker	M-AB20	Scheidel GmbH, Postfach 11 47, 96111 Hirschaid
Scheidel – macs Blitz Entlacker	-	Scheidel GmbH
Scheidel – macs Graffiticlean	M-AB20	Scheidel GmbH
Scheidel – macs Graffitientferner P	M-AB20	Scheidel GmbH
Scheidel – macs POWERclean Entlacker	-	Scheidel GmbH
Scheidel – macs SEPARATOR	M-AB10	Scheidel GmbH
Scheidel – macs SG94	M-AB20	Scheidel GmbH
Scheidel – macs Soft-Graffitientferner	M-AB20	Scheidel GmbH
Setta-Fassadenabbeizer	M-AB20	VFG Verbund Farbe und Gestaltung GmbH, Max Volmer Str. 1, 40724 Hilden
Setta-Lack- und Graffiti-Entferner	-	VFG Verbund Farbe und Gestaltung GmbH
STO-FASSADENABBEIZER	M-AB20	Sto AG, Ehrenbachstr. 1, 79780 Stühlingen
TOP ABBEIZER 155	M-AB10	Brillux König + Flügger GmbH + Co.KG, Weselerstraße 401, 48163 Münster
TURCO 5250-203	-	TURCO-Chemie GmbH, Wandsbeker Stieg 23, 22087 Hamburg
TURCO 6776-LO	-	TURCO-Chemie GmbH
TURCO 6813	-	TURCO-Chemie GmbH
TURCO Abbeizpaste 1270/5	-	TURCO-Chemie GmbH
Ultralan Clear Abbeizer	M-AB20	Ultralan GmbH & Co. KG, Brühler Str. 59, 42657 Solingen
3M Graffiti Farbfentferner GR1	-	3M Deutschland GmbH, Carl-Schurz-Straße 1, 41453 Neuss
3M Graffiti Farbfentferner GR2	-	3M Deutschland GmbH
3M Graffiti Farbfentferner GR3	-	3M Deutschland GmbH
AGE Graffiti Entferner	M-AB10	Remmers Bauchemie GmbH, Postfach 1255, 49624 Lönigen

* this list may not be complete