A Wallpaper Hanger, Sensitized to Chloroacetamide, Ethylene Diamine and Proxel BD

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In an effort to replace parabens and formaldehyde, new preservatives have been developed. Such preservatives may be present in peroral medicaments, topical medicaments, cosmetics, metalprocessing coolants (=cutting oils). Many are enumerated by Robertson and Storrs (1982).

Rather new sensitizers are Germal 2 (=Diazolidinyl urea; test 1% in Petrolatum), Kathon CG (test 0.01% in water, a higher concentration may give a patch test sensitization) and Proxel BD (test 0.1% in water).

Proxel is a product of ICI. It is marketed in various grades of purity, grades of concentration and in combination with other substances. They are distinguished from each other by certain initials added to the name Proxel. Pedersen (1976) reported sensitizations to Proxel CRL, a solution of 1,2-benzoisothiazolin 3 one and ethylene diamine, present in polyacrylate emulsions used for paints and floor waxes. Proxel CRL was also named by Robertson and Storrs in 1982 in their list of substances to be tested in machinists. Ippen (1979) mentioned Proxel as biocide in coolants, see also Alomar (1983).

I observed a wallpaper hanger sensitized to chloroacetamide preservative in the glue he used in his work. He changed to a different brand and after some months his dermatitis recurred.

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GERMAL 2 = DIAZOLIDINYL UREA (1% PET.)

**Fig. 1.** A wallpaper hanger, sensitized to chloroacetamide, ethylenediamine and proxel BD.


This relapse was due to the Proxel in the new glue: a combination of ethylene diamine, to
which he gave a late positive reaction, and Proxel BD (consisting of 2,2-dithiobisbenzamid and 1,2-benzisothiazoline 3 one). It is tempting to suppose that the S-S- bridge of 2,2-dithiobis-
benzamid breaks in the middle, and that the resulting molecules thereupon form ring structures between the S and the NH₂-groups leading to the isothiazoline-3-one structure. The patient also reacted to this Proxel BD.

Kathon CG containing two chemicals related to the isothiazoline-3 one of Proxel—namely 5. chloro 2. methyl 4. isothiazolin 3 one and 2. methyl 4. isothiazolin 3 one tested in 0.01% in water—gave negative reactions in this patient.

The Proxel combination with ethylene diamine can be used as well to preserve paper.

From an ICI pamphlet it can be learned that other types of Proxel contain the following ingredients: Proxel AB : aqueous dispersion with 33% BIT (benzisothiazoline), Proxel GLX : water + dipropylene glycol + 20% BIT, Proxel CRL : water + ethylenediamine + 33% BIT, Proxel XLZ : water + propylene glycol + 9.5% BIT, Proxel TN : triazine + BIT.

References.
3. Pedersen, N. B. : Occupational allergy from 1,2-benziisothiazolin-3-one and other preservatives in plastic emulsions.

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Paraben や formaldehyde に代る新防腐剤のうち、感作物質として Germal 2, Katon CG, Proxel BD があげられる。接着剤中の防腐剤の chloroacetamide に感作された壁張り職人を治療。本患者は ethylene diamine と Proxel BD 含有の新しい接着剤の使用で症状の再燃を来たす。Ethylenediamine と Proxel BD 陽性。