



THE RENOVATION AND PROTECTION OF ROOFS BY COATINGS

by Leon Bancken

- ☐ A protection which is creating an added value
- ☐ Preparation of the roof surfaces
- ☐ A ROOF COATING system must have several characteristics
- ☐ The system **RD-ROOF ACRYL NEW**
- ☐ The colourless protection of roof surfaces
- ☐ CEMENT CONTAINING PLATES: waterproofing, protection and encapsulation of harmful asbestos fibers
- ☐ Waterproofing of flat roofs with liquid roof systems
RD-ELASTODECK-RD-REPAIR FIBER
- ☐ METAL ROOFS: the protection of these is explained in the brochure: "Rust doesn't rest"





WHY DO WE RENOVATE, PROTECT AND EMBELLISH SLOPING ROOFS IN ARTIFICIAL SLATES, TILES, PLATES, ETC. BY MEANS OF A COATING SYSTEM?



Roofs made of artificial slates, tiles, cement bound plates etc., are very much subject to air pollution, acid rain and the adhesion of algae and moss. These environmental factors affect the substrate and without any protection this substrate will continue to be subjected to these natural elements. This might eventually cause the total destruction of the roof. It can also cause the release of harmful asbestos fibres, a major danger to our health.



By taking a look at our qualitative productline **RD-COATINGS**, it is obvious that it is not only important to protect and embellish the façades of the house, but also its upper part. This has to be done in order to avoid irreversible damage, which could cost a lot of money and could have a negative impact on our safety as well as the comfort and aesthetics of the house.



**THIS PROTECTION IS
CREATING
AN ADDED VALUE**



PREPARATION OF THE ROOF SURFACES.

► General rules:



- Cleaning by high water pressure or, even better, by steaming (about 150 Bar).

- Whenever there is moss present, the surface should be saturated with an effective anti-moss product.

- After waiting a few days the roof has to be cleaned with high pressure. Most of the time this moss has deep roots and therefore it should be completely exterminated and removed.



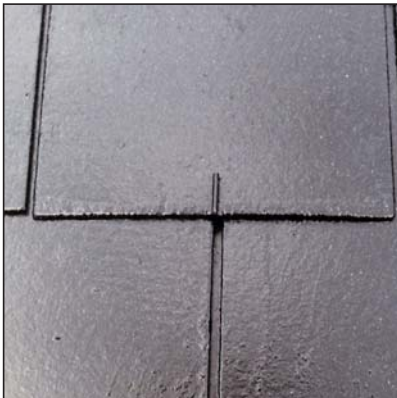
- When cleaning, pay special attention to the borders and joins of the slates and plates (critical points for moss growing)

- Cleaning by means of scratching devices, steel brushes and grinding or sanding discs is not advisable.

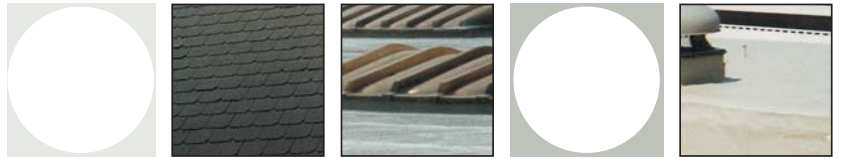
These treatments damage the roof and can be harmful by the release and possible eventual propagation of asbestos fibres.



A ROOF COATING SYSTEM MUST HAVE SEVERAL CHARACTERISTICS:



- Must protect and reinforce the substrate.
- Must be able to protect the environment against the propagation of harmful asbestos fibres.
- Must be able to protect the roof (slates, tiles, plates etc...) against aggressive air pollution and changing weather conditions like heat, snow, hail, heavy freezing, wind storms and violent rain falls.
- Must be water repellent.
- Must be UV resistant.
- Must show a durable aesthetic aspect.



The system **RD-ROOF ACRYL NEW**

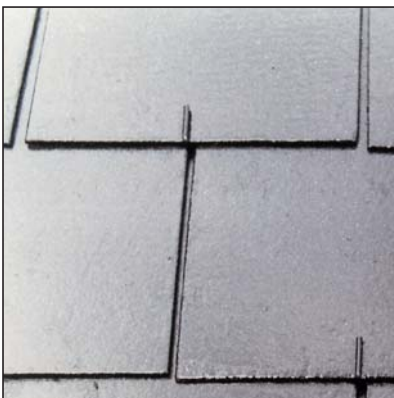
Recommended instructions for use:



➤ Artificial slates or tiles:

- Prior to application, the rough and thick moss has to be removed.
- Apply an effective and environment friendly anti-moss product. This should be done according to the instructions of the manufacturer.
- Clean by means of high water pressure (up to about 200 Bar).
- Apply the first coat of **RD-ROOF ACRYL NEW**, diluted with 10% of water on a clean and normal, porous substrate.
- After drying, finish with a second coat of **RD-ROOF ACRYL NEW**, diluted with 5% of water.

PS: On extremely weathered and porous substrates it is recommended to first thoroughly saturate the substrate with **RD-UNIFIX**.



➤ Natural slates:

- First clean as explained above.
- As a primer (adhesion coat) **RD-ELASTOVAR**, diluted with 10% of water, has to be applied.
- Finish with undiluted **RD-ELASTOVAR**.



□ The colourless protection of roof surfaces

RD-ACRYVAR

- Solvent-borne acrylic varnish
- Colourless
- Flexible
- Non yellowing
- Alkali resistant
- UV resistant

RD-ELASTOVAR

- Water-borne acrylic varnish
- Colourless
- Flexible
- Non yellowing
- Alkali resistant
- UV resistant

- Appropriate to be used as a stain, and as protection for slates, tiles, plates, aluminium covering, concrete, capstones, bricks, window-ledges, etc... This treatment is applied in order to obtain a water and dirt repellent film.

Instructions for use:

1. Tiles should first be saturated with an anti-moss emulsion. Let it rest for a few days.
2. Then, clean these with high water pressure.
3. Let tiles dry completely.
4. Finish with at least 2 coats of **RD-ACRYVAR** or **RD-ELASTOVAR** in order to obtain a uniform, close film.
5. The consumption is depending on the porosity of the substrate.

- Also appropriate for the renovation of synthetic glass domes (except those in polycarbonate).

Instructions for use:

1. Clean with high water pressure.
2. Let completely dry.
3. After this, apply at least 2 coats of **RD-ACRYVAR** or **RD-ELASTOVAR**.
4. Damages can be fixed by sticking polyester fleece in the wet coat.
5. This system offers following advantages:
 1. The Polyester fibres are encapsulated
 2. Dirt repellent effect

- Other application: Protection of aluminium from window and door frames etc...

Instructions for use:

1. Clean the attacked and dirty aluminium substrate with an appropriate cleaning product. This should be done in accordance with the instructions of the supplier.
2. After drying, apply at least two coats of **RD-ACRYVAR**.

- Please refer to the attached technical data sheet.



CEMENT CONTAINING PLATES: waterproofing, protection and encapsulation of harmful asbestos fibers

DEFINITION OF THE PROBLEM:

- Strongly attacked and weathered substrate by all kinds of moss.
- Powdering substrate with presence of very small cracks, through which water could penetrate and cause damage to possibly stored goods.
- Pollution by the release and dispersion of asbestos fibres.



➤ 1. WATERPROOFING OF PLATES

This system is crack bridging and protective.
Instructions for use:

Cleaning with high water pressure (up to 300 Bar).

The cleaning depends on the surface condition. It should be done in order to obtain a surface which is completely free of dirt, moss and algae.

When the moss is highly rooted, an effective, environment friendly anti-moss product has to be used, according to the specifications of the supplier.

If the substrate is highly weathered and porous, it should first be carefully and deeply saturated with **RD-UNIFIX**.

Consumption: 4 to 8 m²/L.

Finish with one thick coat of **RD-ELASTODECK**.

Consumption: about 500g/m²

Finish with one coat of **RD-ELASTOVAR**.

➤ 2. PAINTING OF PLATES

This system is improving the aesthetic aspect.
Asbestos fibres will not be encapsulated.

Instructions for use:

On a very porous substrate **RD-UNIFIX** has to be used to saturate the substrate.

On a normal or slightly porous substrate the first coat of **RD-ROOF ACRYL NEW** has to be applied directly on the substrate. After drying, a second coat should be applied.

PS: Always read the technical data sheets very carefully. Our technical service is always at your service, should you have any questions.

➤ SOME USEFUL INFORMATION:

- In some countries there are very stringent regulations regarding the cleaning of asbestos containing substrates. Please comply with your local laws and regulations.
- The plates can be protected by a heat reflecting coating. In order to obtain this, following coating combination can be applied:
 - **RD-ELASTODECK** white (500g/m²) and **RD-ELASTOVAR**
 - **RD-ELASTODECK** (500g/m²) and **RD-ROOF ACRYL NEW** white
 - 2 coats of **RD-ROOF ACRYL NEW** white
- Before cleaning roofs, necessary attention should be paid to the eventual existence of a base roof. Water penetrations that might cause any damage, should be avoided.
- Sometimes, on moss containing slate roofs with an insufficient slope the moss can form a buffer



for several years. This buffer is able to prevent the penetration of water, even with heavy rain showers.

It is then possible that, after cleaning, there is water penetration during heavy rain showers.

Insufficient slate overlaps and capillarity can also play an important role in this problem.

The person who is doing the job needs to have a very good idea of the roof situation.

Possible problems should be written down and discussed with the owner or person who is in charge. This report should be signed by the owner in order to avoid any discussion afterwards.

- **Aesthetic aspect:**

1. Avoid working in the sun during excessively warm weather.
2. With very porous substrates always use a saturation primer. Make sure you apply enough product (Doing so avoids flat spots).

- **Gloss:** **RD-ROOF ACRYL NEW** : Slightly satin aspect.

If a higher gloss is requested (for example for tiles), the product **RD-ROOF ACRYL NEW** can be over-coated with the acrylic varnish **RD-ACRYVAR** or **RD-ELASTOVAR**.

- Please refer to our technical data sheets or ask advice from our technical service.



WATERPROOFING OF FLAT ROOFS WITH LIQUID ROOF SYSTEMS



These systems have a high rate of success due to the ease of application, a very good quality and a proven resistance to all types of extreme climatologic circumstances.

From our experience we know that a lot of traditional waterproofing materials for roofs (like bitumen, asphalt and other products which contain bitumen) do not have the required resistance. Especially because of weathering conditions (the attack by UV rays being the most critical factor), the roof protection loses its elasticity. Then, it starts to crack and loses its adhesion at the seams, at the borders, the domes and other joins. The absorption of heat and the very fast cooling down causes damage and can also lead to water penetration.

It is also important to consider that bituminous roof protections are dangerous (fire risk), especially during their application. Even after the application there is a major risk for fire.

The application of these products is a health hazard, if done without sufficient protection. As a matter of fact, these products contain bituminous solvents and other derivatives.

They contribute to environmental pollution..



➤ LIQUID WATERBORNE ROOF PRODUCTS do have a lot of major advantages:

- They do not have any seams or joins.
- They contribute to a homogenous and durable protection against water penetration and all kinds of weathering factors.
- They show a good resistance against UV rays and do not crack.
- During the renovation of roofs the old roof protection can remain. By doing this, a lot of expenses due to dumping can be avoided.
- Easy to apply by means of brush, roller or airless.
- When reinforced with fleece, this system has a very long lifespan.

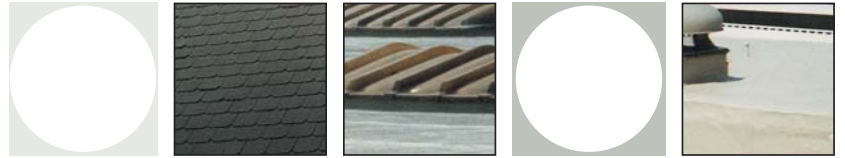
➤ HEAT REFLECTING ROOF PROTECTION

Sloping or flat roofs can be recoated by a heat reflecting roof protection:

On the waterproofing system **RD-ELASTODECK** which is reinforced or not with a fleece, a topcoat of **RD ELASTOROOF ALU** can be applied.

This finish is giving in addition to the waterproofing a very effective heat reflecting power. For this system also a warranty of 10 years can be granted.

- **RD-COATINGS-ROOF TECHNOLOGY** is giving an extensive technical support for individual roofs. The problem of the roof is analyzed, the system is described and an advice is given on a free base. In case of an execution in accordance with the technical advice, a warranty of 10 years on waterproofing can be granted.



➤ RD-ELASTODECK

- Is a waterborne, single component product which is easy to apply, including over the borders and joints.
- After complete drying of the product a permanently elastic film is obtained. This has no seams and shows a very good adhesion on most types of bituminous substrates.
- **RD-ELASTODECK** has a very long lifespan.
- Is resistant to industrial pollution.
- Easy to do local repairs with one single product.
- Most important: There is no fire risk during the application or handling.
- Environment friendly.
- No protective measures need to be taken during the handling of the product.
- Hands and application material are easily cleaned with water.



➤ RD-REPAIR FIBER

- If you experience leakage problems during the winter or any time with severe weather conditions, we advice to use the product **RD-REPAIR FIBER** for immediate repairs.
- This can even be done on a slightly humid surface and before a rain or snow shower.
- The product should be applied in a thick coat and has always to be brushed in the same direction (application by brush).

