

**TECHNISTONE, a.s.**

## **MANUAL FOR CLEANING AND MAINTENANCE OF Technistone®**

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# 1. General information about maintenance and cleaning

Resistance of the Technistone® product surface to mechanical and chemical influences is given by the raw materials used (silicates, hardened polyester resin). The hardness of the surface (6 – 7 grade according to Mohs), compactibility and a very low absorbability make the product highly resistant to common influences. Even so, the protection of the product surface under a long-term exposure to abrasive impurities (this is relevant mainly for a product installed on the floors) is the reason for recommending the regular maintenance and cleaning of the product surface. This ensures the stability of the surface finish and of the aesthetic appearance of the product.

A product applied e.g. for kitchen countertops does not require a special maintenance and is maintained by usual non-abrasive kitchen cleaning agents. Nevertheless, cleaning and curing agents for the surface are mentioned also for such product applications here. These agents make the maintenance of the surface at common kitchen operation, e.g. at long-term and regular contact with the drops of oils spurted at frying or with the drying drops of dirty water, significantly easier.

On the market there are available various special products, which are specified to increase the protection against stains (impregnations, various products containing waxes). These products make your everyday maintaining easier.

The cleaning and maintenance of the engineered stone Technistone® depends on the sort of surface finish of the product, on the location of the product, on the mechanical load of the product, etc. The cleaning and maintenance, especially of larger surfaces, are recommended to be realized by a specialized company experienced in maintenance of the Technistone® products or engineered stone.

Material could be maintained by usual non-concentrated cleaning agents; for the deep and more frequent cleaning and maintenance following special cleaning agents from companies: Technistone a. s. - Techniset, Fila, Bellinzoni, Moeller Chemie, Lithofin, HG International, Akemi, Lasselsberger, etc are recommended.

More detailed information you can find on our web sites: [www.technistone.eu](http://www.technistone.eu)

## Caution!

**Taurus Blue Bahia** material contains "Sodalite" (based on lime stone). On this account, do not use any detergent with small quantity of acids to clean surface. Definitely avoid using cleaners containing strong acids. For maintenance it is important to clean the surface only with water or some neutral detergents! It is necessary to wash out for instance lemon or vinegar as soon as possible.

**Crystal Dark Shell** material contains organic seashells, which are very sensitive to strong detergents. Therefore, do not use any strong detergent to clean surfaces with seashell effect. Definitely avoid using cleaners containing bleach that may permanently harm the surface. For maintenance it is important to clean only the surface with water or some neutral detergents!

***It is very important to keep these instructions to minimize the surface damage of these materials!***

## **2. Important instructions for cleaning the products**

Before using chosen cleaning or protecting agent (especially valid for industrial cleaning agents for the cleaning of floors), it is necessary to test it on a small area and only after the evaluation of the results on a dried-up product to carry out the overall application!!

Most of the agents are to be diluted according to the instructions of their producers!!

After using cleaning agents it is always necessary to remove the cleaning agent and the released impurities from the product surface quickly and carefully and to wash the surface thoroughly with pure water!!

Longer and not necessarily required exposure to aggressive cleaning agents will probably erode the product surface!!

The product surface (especially its polished surface finish) does not resist in the long-term to exposure to strong alkalies (NaOH, KOH...) and does not resist even in the short-term to the fluorhydric acid (HF). These chemicals are contained in some cleaning agents, which are available on the market. Therefore, for cleaning the surfaces it is important to use only products, which are suited for the cleaning of engineered stone; they may not be identical to the cleaning agents for natural granites or ceramics.

For cleaning, especially after the installation and jointing of floor tiles or for the cleaning of the tiles, which are highly dirty in the long term, use recommended products and not the mixtures of chemicals (lye, hydrochloric acid, hypochlorite...). The cleaning and maintenance, especially of larger surfaces, are recommended to be realized by specialized company experienced in maintenance of the Technistone® products or engineered stone.

It is necessary to take into account and keep the recommendations of the producers pertaining to the usage (e.g. dilution...) and with the safety regulations of used agents. It is necessary to use protecting instruments according to the instructions from their producers.

Also the below mentioned facts, based on experiments and practical experience, are to be assessed and taken into consideration. Only general instructions are provided here, because the producer of the engineered stone has no influence on the individual conditions of performing the maintenance.

## 2.1. Recommended special agents

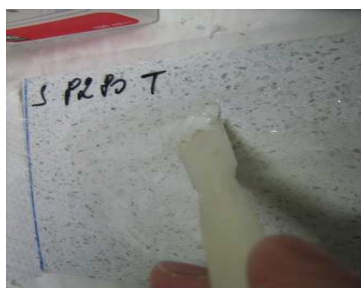
For cleaning and maintenance the products from the companies: Technistone a. s. (Techniset), Fila, Bellinzoni, Moeller Chemie, Lithofin, HG International, Akemi, Lasselsberger are recommended. The companies offer integral product ranges for these purposes.

Preview of cleaning of Technistone® product:

### HG Graffiti remover



### HG silicon seal remover



## Recommended cleaning agents for product Technistone®

| Company: Technistone a.s. (www.technistone.cz) |              |                                       |      |
|------------------------------------------------|--------------|---------------------------------------|------|
| Product                                        | Usage        |                                       | Note |
| Techniset for kitchen tops                     | Common usage | remover of oils and common impurities | -    |

| Company: Fila (www.filachim.com) |                    |                                                    |                                                |
|----------------------------------|--------------------|----------------------------------------------------|------------------------------------------------|
| Product                          | Usage              |                                                    | Note                                           |
| Fila Cleaner                     | Common usage       | universal floor cleaner                            | necessary to dilute!                           |
| Fila Formula Marmo               |                    | cleaning and caring for glossy materials           | gloss enhance                                  |
| Fila Brio                        |                    | universal cleaner                                  | without washing off!                           |
| Deterdek                         | Intensive cleaning | acid descaling floor cleaner                       | limited period of action, necessary to dilute! |
| Fila PS/87                       |                    | degreasing cleaner, wax remover                    | possible to dilute, according to usage!        |
| Fila SR/95                       |                    | removes colored organic stains: wine, soft drinks, | -                                              |

| Company: Fila (www.filachim.com) |                    |                        |                                  |
|----------------------------------|--------------------|------------------------|----------------------------------|
| Product                          | Usage              |                        | Note                             |
|                                  |                    | coffee, tea, etc.      |                                  |
| Fila NoSpot                      |                    | stain remover in spray | -                                |
| Fila Fuganet                     |                    | grout cleaner          | -                                |
| Fila Long Life                   | Surface protection | self –shining wax      | possible to dilute, high gloss!  |
| Fila Kristall                    |                    | wax                    | -                                |
| Fila Classic                     |                    | wax                    | possible to dilute               |
| Fila Fugaproof                   |                    | grout impregnation     | water-borne, suitable for mosaic |
| Fila Stone Plus                  |                    | impregnation           | <b>color enhance!</b>            |
| Fila MP/90                       |                    | stain protection       | <b>no color enhance!</b>         |

| Company: Lithofin (www.lithofin.de) |                    |                                          |                                                                                         |
|-------------------------------------|--------------------|------------------------------------------|-----------------------------------------------------------------------------------------|
| Product                             | Usage              |                                          | Note                                                                                    |
| Lithofin MN Easy-Clean              | Common usage       | clean and care, medium alkali            | -                                                                                       |
| Lithofin MN Easy-Care Cleaner       |                    | floor cleaner, medium alkali             | necessary to dilute, <b>color enhance!</b>                                              |
| Lithofin MN Power-Clean             | Intensive cleaning | cleaner, medium alkali                   | necessary to dilute, limited period of action!                                          |
| Lithofin Oil-Ex                     |                    | oil and fat remover                      | -                                                                                       |
| Lithofin MN Builders Clean          |                    | cement film remover, strong acid cleaner | necessary to dilute, limited period of action!                                          |
| Lithofin Wax-off                    |                    | organic stains and wax remover           | limited period of action!                                                               |
| Lithofin Rust-EX                    |                    | rust remover, medium alkali              | limited period of action!                                                               |
| Lithofin MN Protector               | Surface protection | impregnation                             | polished materials - <b>gloss enhance!</b><br>brushed materials - <b>color enhance!</b> |

| Company: Moeller Chemie (www.moeller-chemie.de, www.moellerstonecare.eu) |                    |                                          |                                                |
|--------------------------------------------------------------------------|--------------------|------------------------------------------|------------------------------------------------|
| Product                                                                  | Usage              |                                          | Note                                           |
| HMK-P1 RSP -three in one-                                                | Common usage       | 3 in 1 - clean, polish and protection    | -                                              |
| HMK-P24 Liquid stone soap "no rinse"                                     |                    | cleaner, 100% natural, pH7 neutral       | necessary to dilute!                           |
| HMK-R55 Intensive cleaner                                                |                    | intensive cleaner, acid free             | possible to dilute, limited period of action!  |
| HMK-R75 Exterior stone cleaner                                           | Intensive cleaning | strong stone cleaner                     | necessary to dilute, limited period of action! |
| HMK-R54 Stripper-stain remover                                           |                    | strong cleaner                           | -                                              |
| HMK-R63 Cement film remover                                              |                    | cement film remover, strong acid cleaner | necessary to dilute, limited period of action! |
| HMK-R77 Rust remover                                                     |                    | acid rust remover                        | limited period of action!                      |
| HMK-R52 Oil and wax remover                                              |                    | degreasing cleaner, wax remover          | -                                              |

| Company: Moeller Chemie (www.moeller-chemie.de, www.moellerstonecare.eu) |                    |                     |                   |
|--------------------------------------------------------------------------|--------------------|---------------------|-------------------|
| Product                                                                  | Usage              |                     | Note              |
| HMK-S34 Silicone impregnator - extra protection                          | Surface protection | impregnation        | no color enhance! |
| HMK-S42 Color enhancer                                                   |                    | impregnation        | color enhance!    |
| HMK-S39 Stone sealer - high gloss                                        |                    | glossy impregnation | color enhance!    |
| HMK-S32 Water base impregnator                                           |                    | impregnation        | no color enhance! |

| Company: Akemi (www.akemi.de) |                    |                                                             |                                                |
|-------------------------------|--------------------|-------------------------------------------------------------|------------------------------------------------|
| Product                       | Usage              |                                                             | Note                                           |
| Quartz Clean & Care           | Common usage       | clean and care, spray                                       | easy usage!                                    |
| Mild Stone soap               |                    | basic clearing and care                                     | necessary to dilute!                           |
| Quartz Intensive Cleaner      | Intensive cleaning | cleaner, without acid, spray                                | easy usage!                                    |
| Stone cleaner                 |                    | fats, grease and cement film remover, strong alkali cleaner | necessary to dilute, limited period of action! |
| Ceramics Cement Film Remover  |                    | cement film remover, strong acid cleaner                    | necessary to dilute, limited period of action! |
| Rust Remover                  |                    | rust remover, strong acid cleaner                           | limited period of action!                      |
| Wax Stripper                  |                    | wax and fat remover                                         | limited period of action!                      |
| Quartz Polish                 | Special usage      | stone gloss, spray                                          | easy usage!                                    |
| Stone Impregnation            | Surface protection | impregnation, <b>no color enhance!</b>                      | -                                              |

| Company: Industrial Chem Italia (www.industrialchemitalia.com) |                    |                         |                   |
|----------------------------------------------------------------|--------------------|-------------------------|-------------------|
| Product                                                        | Usage              |                         | Note              |
| Antislip K 37                                                  | Special usage      | make an antislip strips | -                 |
| New Microkem DC8                                               | Surface protection | impregnation            | increasing gloss! |

| Company: Zenit s. r. o., Čáslav (www.zenit-caslav.eu) |                    |                                                |                                                |
|-------------------------------------------------------|--------------------|------------------------------------------------|------------------------------------------------|
| Product                                               | Usage              |                                                | Note                                           |
| Real universal grease remover                         | Common usage       | remove oils and impurities                     | necessary to wash down!                        |
| Real bathroom cleaner                                 |                    | remover of scales and residue of soaps         | necessary to dilute, limited period of action! |
| Hit floor                                             |                    | universal cleaner                              | possible to dilute, limited period of action!  |
| Real MAXI Universal                                   | Intensive cleaning | universal cleaner – makes the protection layer | possible to dilute, necessary to wash down!    |

| Company: Lasselsberger (www.lasselsberger.com) |              |                                                    |                                             |
|------------------------------------------------|--------------|----------------------------------------------------|---------------------------------------------|
| Product                                        | Usage        |                                                    | Note                                        |
| CL 803                                         | Common usage | cleaner for every polished surfaces                | possible to dilute, necessary to wash down! |
| CL 804 Relief                                  |              | wide range of removing impurities, antislip floors | possible to dilute, necessary to wash down! |

| Company: HG International (www.hg.eu)       |                    |                                                                                                 |                                             |
|---------------------------------------------|--------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------|
| Product                                     | Usage              |                                                                                                 | Note                                        |
| HG natural stone kitchen top cleaner        | Common usage       | daily cleaning of kitchen tops, without leaving stripes                                         | -                                           |
| HG ceramic hob cleaner for every day use    |                    | cleaner for everyday usage                                                                      | -                                           |
| HG marble bathroom cleaner                  |                    | remover of scales and residue of soaps                                                          | possible to dilute, necessary to wash down! |
| HG streak free                              |                    | floor cleaner without leaving stripes                                                           | -                                           |
| HG spot stain remover                       | Intensive cleaning | spot stain remover                                                                              | necessary to dilute, to wash down!          |
| HG marble stain color remover               |                    | removes all kinds of colored liquid stains such as coffee, tea, fizzy drink and red wine stains | limited period of action!                   |
| HG super remover                            |                    | degreasing cleaner wax remover                                                                  | necessary to dilute, to wash down!!         |
| HG oil & grease absorber                    |                    | draws out unsightly oil or grease stains from floors, tabletops and walls                       | -                                           |
| HG grease away                              |                    | removes animal or vegetable fats, grease or oils                                                | necessary to wash down!                     |
| HG grout cleaner                            |                    | grout cleaner                                                                                   | necessary to wash down!                     |
| HG cement, mortar and efflorescence remover |                    | cement film remover, strong cleaner                                                             | necessary to dilute, to wash down!          |
| HG marble cement & lime film remover        |                    | removes cement film and lime scale                                                              | necessary to dilute!                        |
| HG silicon seal remover                     | Special usage      | silicon seal remover                                                                            | -                                           |
| HG graffiti remover                         |                    | graffiti remover                                                                                | necessary to wash down!                     |
| HG marble protector                         | Surface protection | impregnation suitable for the bathrooms                                                         | <b>no color enhance!</b>                    |
| HG Top protector                            |                    | protection against stains                                                                       | <b>no color enhance!</b>                    |

| Firma: Knief, Euroseal (www.kniefco.com, www.eurosealsealers.com) |                    |                                               |                                                |
|-------------------------------------------------------------------|--------------------|-----------------------------------------------|------------------------------------------------|
| Product                                                           | Usage              |                                               | Note                                           |
| Clean & Shine 880                                                 | Common usage       | clean and care, glossy                        | necessary to dilute!                           |
| PH-Rince 800                                                      |                    | neutral cleaner, glossy                       | necessary to dilute!                           |
| Alfa 750                                                          | Intensive cleaning | strong alkali cleaner                         | necessary to dilute, limited period of action! |
| Eurowax 1900                                                      | Special usage      | hard wax, protective against UV light, glossy | -                                              |
| Slipproof 1300                                                    |                    | antislip                                      | -                                              |
| Aquapro 1010                                                      | Surface protection | impregnation, <b>no color enhance!</b>        | internal and external usage!                   |

| Company: Bellinzoni (www.bellinzoni.com, www.bellinzoni.cz) |                    |                                                                            |                                                                       |
|-------------------------------------------------------------|--------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Product                                                     | Usage              |                                                                            | Note                                                                  |
| Wash and polish L&L                                         | Common usage       | clean and polish all at once                                               | necessary to dilute!                                                  |
| Antislip clean & polish AS 22                               |                    | clean and wax all at once                                                  | necessary to dilute!                                                  |
| Detergent Lem 3                                             | Intensive cleaning | deep cleaning with high efficiency                                         | possible to dilute, necessary to wash down!                           |
| Extra strong detergent Bert 27                              |                    | strong acid cleaner, deep cleaning, fats, grease and cement film remover   | possible to dilute, necessary to wash down, limited period of action! |
| Alcaline based cleaner K 3                                  |                    | extra strong alkali cleaner                                                | possible to dilute, necessary to wash down, limited period of action! |
| Wax remover Decer Dos                                       |                    | intensive old wax remover                                                  | necessary to dilute!                                                  |
| Ultra Stripper gel                                          |                    | effective fats, grease, wax and cement film remover                        | possible to dilute, necessary to wash down, limited period of action! |
| Antique Finish Liquid Vieux                                 | Special usage      | special glossy impregnation                                                | <b>color enhance!</b>                                                 |
| Protective Consolidating Porosil                            |                    | special impregnation, protects against UV light and acid rains, antistatic | <b>color enhance!</b>                                                 |
| Pasta Mangia Macchia                                        |                    | special paste, removes stains                                              | -                                                                     |
| Anti-Graffiti Strip-Vapor                                   |                    | protection against graffiti                                                | -                                                                     |
| Water And Oil Repellent Block D70                           | Surface protection | impregnation                                                               | <b>color enhance!</b><br>necessary to dilute                          |
| Water Repellent Ker 13-D                                    |                    | hydrophobic impregnation                                                   | <b>no color enhance!</b>                                              |
| Water and Oil Repellent Idea XC                             |                    | impregnation, wet looking                                                  | <b>color enhance!</b>                                                 |
| Water and Oil Repellent Idea Hp                             |                    | impregnation                                                               | <b>no color enhance!</b>                                              |
| Spray RR / 1                                                |                    | floor wax, glossy                                                          | necessary to dilute, intensifies color!                               |
| Antislip polisher As 11                                     |                    | floor wax, glossy, antislip                                                | necessary to dilute, intensifies color!                               |
| Liquid wax Mythos                                           |                    | wax for stressed floors, glossy                                            | necessary to dilute, intensifies color!                               |

### 2.1.1. Problems and Solutions Quick Guide

| Kitchen tops and vanity tops |                                                 | Regular everyday cleaning | Intensive cleaning (cement, stains...) | Removing scales and residue of soaps | Surface protection |
|------------------------------|-------------------------------------------------|---------------------------|----------------------------------------|--------------------------------------|--------------------|
| Technistone                  | Techniset for kitchen tops                      | x                         |                                        |                                      |                    |
| Fila                         | Fila Formula Marmo                              | x                         |                                        |                                      |                    |
|                              | Fila Brio                                       | x                         |                                        |                                      |                    |
|                              | Fila SR/95                                      |                           | x                                      |                                      |                    |
|                              | Fila NoSpot                                     |                           | x                                      |                                      |                    |
|                              | Fila Fuganet                                    |                           |                                        | x                                    |                    |
|                              | Fila Fugaproof                                  |                           |                                        |                                      | x                  |
|                              | Fila Stone Plus                                 |                           |                                        |                                      | x                  |
|                              | Fila MP/90                                      |                           |                                        |                                      | x                  |
| Moeller Chemie               | HMK-P1 RSP -three in one-                       | x                         |                                        |                                      |                    |
|                              | HMK-P24 Liquid stone soap "no rinse"            | x                         |                                        |                                      |                    |
|                              | HMK-R55 Intensive cleaner                       | x                         |                                        |                                      |                    |
|                              | HMK-R77 Rust remover                            |                           | x                                      |                                      |                    |
|                              | HMK-S34 Silicone impregnator - extra protection |                           |                                        |                                      | x                  |
|                              | HMK-S42 Colour enhancer                         |                           |                                        |                                      | x                  |
|                              | HMK-S39 Stone sealer - high gloss               |                           |                                        |                                      | x                  |
|                              | HMK-S32 Water base impregnator                  |                           |                                        |                                      | x                  |
| Lithofin                     | Lithofin MN Easy-Clean                          | x                         |                                        |                                      |                    |
|                              | Lithofin MN Power-Clean                         |                           | x                                      |                                      |                    |
|                              | Lithofin Oil-Ex                                 |                           | x                                      |                                      |                    |
|                              | Lithofin Rust-EX                                |                           | x                                      |                                      |                    |
|                              | Lithofin MN Protector                           |                           |                                        |                                      | x                  |
| HG International             | HG natural stone kitchen top cleaner            | x                         |                                        |                                      |                    |
|                              | HG ceramic hob cleaner for every day use        | x                         |                                        |                                      |                    |
|                              | HG marble bathroom cleaner                      | x                         |                                        | x                                    |                    |
|                              | HG spot stain remover                           |                           | x                                      |                                      |                    |

| Kitchen tops and vanity tops |                                   | Regular everyday cleaning | Intensive cleaning (cement, stains...) | Removing scales and residue of soaps | Surface protection |
|------------------------------|-----------------------------------|---------------------------|----------------------------------------|--------------------------------------|--------------------|
|                              | HG marble stain color remover     |                           | x                                      |                                      |                    |
|                              | HG grease away                    |                           | x                                      |                                      |                    |
|                              | HG super remover                  |                           | x                                      |                                      |                    |
|                              | HG marble protector               |                           |                                        |                                      | x                  |
|                              | HG Top protector                  |                           |                                        |                                      | x                  |
| Bellinzoni                   | Wash and polish L&L               | x                         |                                        |                                      | x                  |
|                              | Detergent Lem 3                   |                           | x                                      |                                      |                    |
|                              | Antique Finish Liquid Vieux       |                           |                                        |                                      | x                  |
|                              | Protective Consolidating Porosil  |                           |                                        |                                      | x                  |
|                              | Pasta Mangia Macchia              |                           | x                                      |                                      |                    |
|                              | Water And Oil Repellent Block D70 |                           |                                        |                                      | x                  |
|                              | Water Repellent Ker 13-D          |                           |                                        |                                      | x                  |
|                              | Water and Oil Repellent Idea XC   |                           |                                        |                                      | x                  |
|                              | Water and Oil Repellent Idea HP   |                           |                                        |                                      | x                  |
| Akemi                        | Quartz Clean & Care               | x                         |                                        |                                      |                    |
|                              | Quartz Intensive Cleaner          |                           | x                                      |                                      |                    |
|                              | Rust Remover                      |                           | x                                      |                                      |                    |
|                              | Stone Impregnation                |                           |                                        |                                      | x                  |
| Zenit Čáslav                 | Real universal grease remover     | x                         |                                        |                                      |                    |
|                              | Real bathroom cleaner             | x                         |                                        | x                                    |                    |
| Industrial Chem Italia       | New Microkem DC8                  |                           |                                        |                                      | x                  |
| Knief                        | Alfa 750                          |                           | x                                      |                                      |                    |

| Special Usage                          | Silicon remover | Graffiti remover | Polish | Joint cleaning | Antislip |
|----------------------------------------|-----------------|------------------|--------|----------------|----------|
| HG International - HG Silicon remover  | X               |                  |        |                |          |
| HG International - HG graffiti remover |                 | X                |        |                |          |
| HG International - HG grout cleaner    |                 |                  |        | X              |          |
| Bellinzoni - Anti-Graffiti Strip-Vapor |                 | X                |        |                |          |
| Akemi - Quartz Polish                  |                 |                  | X      |                |          |
| Fila - Fila Fuganet                    |                 |                  |        | X              |          |
| Industrial Chem Italia - Antislip K 37 |                 |                  |        |                | X        |
| Knief - Slipproof 1300                 |                 |                  |        |                | X        |

| Floors         | Regular everyday cleaning                       | Intensive cleaning (cement, stains, ..) | Surface protection | Waxing | Oil and wax removers |
|----------------|-------------------------------------------------|-----------------------------------------|--------------------|--------|----------------------|
| Fila           | Fila Cleaner                                    | X                                       |                    |        |                      |
|                | Deterdek                                        | X                                       |                    |        |                      |
|                | Fila PS/87                                      | X                                       |                    |        | X                    |
|                | Fila NoSpot                                     | X                                       |                    |        |                      |
|                | Fila Fuganet                                    | X                                       |                    |        |                      |
|                | Fila Long Life                                  |                                         |                    | X      |                      |
|                | Fila Kristall                                   |                                         |                    | X      |                      |
|                | Fila Classic                                    |                                         |                    | X      |                      |
|                | Fila Fugaproof                                  |                                         | X                  |        |                      |
| Moeller Chemie | HMK-R75 Exterior stone cleaner                  | X                                       |                    |        |                      |
|                | HMK-R54 Stripper-stain remover                  | X                                       |                    |        | X                    |
|                | HMK-R63 Cement film remover                     | X                                       |                    |        |                      |
|                | HMK-R77 Rust remover                            | X                                       |                    |        |                      |
|                | HMK-R52 Oil and wax remover                     |                                         |                    |        | X                    |
|                | HMK-S34 Silicone impregnator - extra protection |                                         | X                  |        |                      |
|                | HMK-S42 Colour enhancer                         |                                         | X                  |        |                      |
|                | HMK-S39 Stone sealer - high gloss               |                                         | X                  |        |                      |
|                | HMK-S32 Water base impregnator                  |                                         | X                  |        |                      |

| Floors           |                                             | Regular everyday cleaning | Intensive cleaning (cement, stains, ..) | Surface protection | Waxing | Oil and wax removers |
|------------------|---------------------------------------------|---------------------------|-----------------------------------------|--------------------|--------|----------------------|
| Lithofin         | Lithofin MN Easy-Care Cleaner               | X                         |                                         |                    |        |                      |
|                  | Lithofin Oil-Ex                             |                           |                                         |                    |        | X                    |
|                  | Lithofin MN Builders Clean                  |                           | X                                       |                    |        |                      |
|                  | Lithofin Wax-off                            |                           |                                         |                    |        | X                    |
|                  | Lithofin Rust-EX                            |                           | X                                       |                    |        |                      |
|                  | Lithofin MN Protector                       |                           |                                         | X                  |        |                      |
| HG International | HG streak free                              | X                         |                                         |                    |        |                      |
|                  | HG spot stain remover                       |                           | X                                       |                    |        |                      |
|                  | HG marble stain colour remover              |                           | X                                       |                    |        |                      |
|                  | HG super remover                            |                           | X                                       |                    |        |                      |
|                  | HG oil & grease absorber                    |                           | X                                       |                    |        |                      |
|                  | HG cement, mortar and efflorescence remover |                           | x                                       |                    |        |                      |
|                  | HG marble cement & lime film remover        |                           | x                                       |                    |        |                      |
| Bellinzoni       | Wash and polish L&L                         | X                         |                                         | X                  |        |                      |
|                  | Antislip clean & polish AS 22               | X                         |                                         |                    | X      |                      |
|                  | Extra strong detergent Bert 27              |                           | X                                       |                    |        |                      |
|                  | Alcaline based cleaner K 3                  |                           | X                                       |                    |        |                      |
|                  | Wax remover Decer Dos                       |                           | X                                       |                    |        | X                    |
|                  | Ultra Stripper gel                          |                           | X                                       |                    |        |                      |
|                  | Antique Finish Liquid Vieux                 |                           |                                         | X                  |        |                      |
|                  | Protective Consolidating Porosil            |                           |                                         | X                  |        |                      |
|                  | Pasta Mangia Macchia                        |                           | X                                       | X                  |        |                      |
|                  | Water And Oil Repellent Block D70           |                           |                                         | X                  |        |                      |
|                  | Water Repellent Ker 13-D                    |                           |                                         | X                  |        |                      |
|                  | Water and Oil Repellent Idea XC             |                           |                                         | X                  |        |                      |
|                  | Water and Oil Repellent Idea HP             |                           |                                         | X                  |        |                      |
|                  | Spray RR / 1                                |                           |                                         |                    | X      |                      |
|                  | Antislip polisher As 11                     |                           |                                         |                    | X      |                      |
|                  | Liquid wax Mythos                           |                           |                                         |                    | X      |                      |
| Akemi            | Mild Stone soap                             | X                         |                                         |                    |        |                      |
|                  | Stone cleaner                               |                           | X                                       |                    |        |                      |

| Floors                 |                              | Regular everyday cleaning | Intensive cleaning (cement, stains, ..) | Surface protection | Waxing | Oil and wax removers |
|------------------------|------------------------------|---------------------------|-----------------------------------------|--------------------|--------|----------------------|
|                        | Ceramics Cement Film Remover |                           | X                                       |                    |        |                      |
|                        | Rust Remover                 |                           | X                                       |                    |        |                      |
|                        | Wax Stripper                 |                           |                                         |                    |        | X                    |
| Zenit                  | Hit for floors               | X                         |                                         |                    |        |                      |
|                        | Real MAXI Universal          |                           | X                                       |                    |        |                      |
| Industrial Chem Italia | New Microkem DC8             |                           |                                         |                    |        | X                    |
| Lasselsberger          | CL 803                       | X                         |                                         |                    |        |                      |
|                        | CL 804 Relief                | X                         |                                         |                    |        |                      |
| Knief                  | Clean & Shine 880            | X                         |                                         |                    |        |                      |
|                        | PH-Rince 800                 | X                         |                                         |                    |        |                      |
|                        | Alfa 750                     |                           | X                                       |                    |        |                      |
|                        | Eurowax 1900                 |                           |                                         |                    | X      |                      |
|                        | Aquapro 1010                 |                           |                                         | X                  |        |                      |

## 2.2. Recommended equipment for mechanical curing of the product on floors

- one-disk floor washer with 200 – 300 rpm (for all operations)
- water vacuum cleaner or water extractor
- nylon pads with boar's hair (for washing), white PAD LUX (for applying and polishing-over)
- microfilament mop in aluminium construction for applying and spreading waxes and impregnations

## 2.3. Cleaning of the product surface

### 2.3.1. Cleaning of the surface after installation or before the application of protecting wax / impregnation layer

An appropriate cleaner is applied to the surface of the product (best done by machine, always with PAD disks). After its action (only for the shortest necessary period) should be the cleaner together with the released impurities carefully removed (in the best case by a machine called water extractor, where rinsing of the impurities under pressure and their evacuation are taking place at the same time). Consequently, it is recommended to wash the product surface with soap and pure water!!

### **2.3.2. Cleaning of the product in households (kitchen countertops, tables..)**

The product used in households does not require a special protection, it is sufficient to wipe it with warm water or to use usual household non-abrasive agents or Techniset Orange cleaner. In case of need to clean intensely (e.g. removing old fats around a boiling plate, furring at the sink...) it is possible to use the above mentioned agents. Consequently, it is recommended to wash the product surface with soap and pure water!!

Longer and not necessarily required exposure to aggressive cleaning agents will probably erode the product surface!!

### **2.3.3. Cleaning of the product with high traffic load (shops, clubs,...)**

The cleaning and maintenance, especially of larger surfaces, are recommended to be realized by a specialized company experienced in maintenance of the Technistone® products or engineered stone. Nevertheless, we introduce several important principles:

- For cleaning of the tiles, which are highly dirty in the long term, use recommended products and not the mixtures of chemicals (lye, hydrochloric acid, hypochlorite...). Before using chosen cleaning or protecting agent (especially valid for industrial cleaning agents for the cleaning of floors), it is necessary to test it on a small area and only after the evaluation of the results on a dried-up product to carry out the overall application!!
- For the protection of Technistone® product with high traffic load protection and impregnation agents are recommended. **Protecting and impregnating agents** are always applied to a clean and dry surface.
- When higher mechanical load of the product combined with greater presence of abrasive and liquid contaminants is expected it is recommended to install a cleaning zone (brushes) in front (entrances) of the surface. Especially in winter season, this zone collects a great part of impurities and in this way protects the product surface and prevents quick decrease of the protective wax layer. It is recommended to install the cleaning zones especially in shops, offices, halls, corridors with the entrance directly from the street.

### **2.3.4. Machine cleaning of the product on floors**

Recommended equipments for machine cleaning of the product on floors - one-disk floor washer with 200 – 300 rpm (for all operations), water vacuum cleaner or water extractor, nylon pads with boar's hair (for washing), white PAD LUX (for applying and polishing-over), microfilament mop in aluminium construction for applying and spreading waxes and impregnations.

**The cleaning and maintenance, especially of larger surfaces, are recommended to be realized by a specialized company experienced in maintenance of the Technistone® products or engineered stone.**

### **2.3.5. Special surface finish (product with honed, slate and brushed surface)**

For the protection of products with these surface finishing it is recommended protection and impregnation agents. For the protection of products with high traffic load it is recommended also protection and impregnation agents. According to the level of dirt it is necessary to renew the impregnation. To make the protection layer is recommend to be realized by a specialized company.

Protecting and impregnating agents are applied and spread by a microfilament mop. Excessive agent is to be wiped away. After the protecting or impregnating coating is dry, it is polished-over. When polishing-over is done by a machine it is always necessary to use only the disks with artificial fibers (PAD LUX) and not disks with steel wires!

On the market there are available impregnations - water based or solvent based –both of them can be used. There are impregnation agents which either enhance the color or not – take care! It is very important to read the label or technical data sheet. Impregnation which enhance the color, intensify the shade of the color of material.

During application of **waxes** - it is possible to apply the waxes subsequently in several layers (up to three), always after drying-up, perpendicularly to the preceding layer. It is necessary to leave a pause of at least 24 hours between the application of waxes of various types. Washing of the floor tiles is not possible earlier than after 24 hours since the wax application.

It is necessary to take into account and keep the recommendations of the producers and the safety regulations of used agents!

## **2.4. Protection against abrasive mechanical impurities**

When higher mechanical load of the product combined with greater presence of abrasive and liquid contaminants is expected it is recommended to install a cleaning zone (brushes) in front (entrances) of the surface. Especially in winter season, this zone collects a great part of impurities and in this way protects the product surface and prevents quick decrease of the protective wax layer. It is recommended to install the cleaning zones especially in shops, offices, halls, corridors with the entrance directly from the street.