MY SKIN CARE
## Product Range

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Physioderm® – My Skin Care.

Effective skin protection at work is an essential precondition for a long and healthy professional life. With Physioderm®, you have a competent and committed partner who offers high-valued as well as precisely fitting solutions. As a leading supplier in the domain of occupational skin protection, we develop integrated concepts which comprise all aspects of an effective prevention: precautionary protection against harmful workplace substances, skin-friendly but thorough cleansing, effective disinfection as well as efficient skin care. Almost 100 years of experience and innovation ensure that you can always expect best quality from Physioderm®.

SKIN PROTECTION IS OUR MISSION.
## Skin Protection Program

### Before and during work

#### Skin strain

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<thead>
<tr>
<th>Type</th>
<th>Products</th>
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<tbody>
<tr>
<td>Water-soluble substances</td>
<td>SANIWIP®, NUTRI SAFE, PROTEXSAN</td>
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<td>Highly-adhesive dirt</td>
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### During and after work

#### Dirt level

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<th>Level</th>
<th>Products</th>
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<tr>
<td>Light dirt</td>
<td>STEPHALEN® FRESH FOAM, STEPHALEN® PURE, ECOSAN®, SANIKLIN SOFT</td>
<td>10</td>
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<tr>
<td>Light and medium dirt</td>
<td>STEPHALEN® VITAL</td>
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<td>Medium dirt</td>
<td>PHYSIODERM® ACTIVE PEARLS®, TOPSCRUB® SOFT</td>
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<td>Heavy dirt</td>
<td>ACTIVE PEARLS® PLUS, TOPSCRUB® NATURE, TOPSCRUB® EXTRA</td>
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<td>RAPITUFF®, CONTRA COLOR®</td>
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Individual prophylaxis for sensitive or extremely stressed skin. Further information on pages 28-31.
### Skin Care Products

#### Skin Type

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<td>Dry and strongly stressed skin</td>
<td>CUREA SOFT</td>
<td>14</td>
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<tr>
<td>Very dry and extremely stressed skin</td>
<td>PHYSIODERM® CREME CARE PURE</td>
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### Disinfectants

#### Application Area

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<th>Product</th>
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<tr>
<td>Gentle hand disinfection</td>
<td>MYXAL® SEPT GEL MYXAL® SEPT 80</td>
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<tr>
<td>Hand decontamination</td>
<td>MYXAL® HD</td>
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<td>Disinfection wipes</td>
<td>INCLUDAL® WIPES</td>
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<td>Surface disinfection</td>
<td>INCLUDAL® ANTISEPT</td>
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<tr>
<td>Prevention of athlete’s foot</td>
<td>MYXAL® FOOT SPRAY MYXAL® S CONCENTRATE</td>
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Individual prophylaxis for sensitive or extremely stressed skin. Further information on pages 28-31.
1. SKIN PROTECTION

**WATER-SOLUBLE SUBSTANCES**

**SANIWIP®, SANIWIP® F**
Skin protection cream in case of skin exposure to water-soluble substances, e.g. water-based cooling lubricants, diluted acids, detergents and disinfectants.
- water-resistant W/O emulsion
- greasy cream
- silicone-free
- fragrance-free
- suitable for the food industry
- HACCP-compliant

**PROTEXSAN**
Skin protection cream in case of skin exposure to aqueous and water-soluble substances, e.g. water-based oils and cooling lubricants, detergents and disinfectants, as well as protection against free radicals.
- contains luteolin, coenzyme Q10 and vitamin E as well as skin-related lipids
- quickly absorbed
- without preservatives
- without emulsifiers
- without mineral oil
- silicone-free
- fragrance free
- HACCP-compliant

**NUTRI SAFE**
Skin protection cream in case of skin exposure to water-soluble substances, especially in the food industry, e.g. aqueous food products, detergents and disinfectants.
- food safe
- quickly absorbed
- without mineral oil
- silicone-free
- fragrance-free
- HACCP-compliant

**GLOVE WEARERS**

**PROGLOVE**
Skin protection gel against skin maceration in case of wearing occlusive protective clothing, e.g. gloves or rubber boots.
- with skin-strengthening hama-melis and moisturizing bisabolol
- contains alcohol
- free from greases
- silicone-free
- fragrance-free
- HACCP-compliant

---

Individual prophylaxis for sensitive or extremely stressed skin. Further information on pages 28-31.
Skin protection products are used before and during work. They are designed in order to prevent the skin from damage caused by potentially harmful substances. In order to provide optimum prevention, skin protection products should exactly match with the substances the skin is exposed to during work.

**WATER-INSOLUBLE SUBSTANCES**

**SANSIBAL®**
Skin protection cream in case of skin exposure to water-insoluble substances, e.g. oil, grease or resins.
- water-soluble O/W emulsion
- quickly absorbed
- silicone-free
- perfumed
- skin-neutral pH value

**SANSIBON®**
Skin protection cream for handling highly-adhesive and water-insoluble substances, e.g. oil, graphite, varnish, adhesives and resins.
- facilitates skin cleansing
- contains dirt-binding emulsifiers
- quickly absorbed
- without mineral oil
- silicone-free
- perfumed

**VARYING WORKING MATERIALS**

**DUALIN®**
Skin protection cream with dualistic effect in case of skin exposure to not clearly defined or varying, water-soluble or water-insoluble substances.
- with waxes and special film-forming substances
- quickly absorbed
- without mineral oil
- silicone-free
- perfumed or fragrance-free
- HACCP-compliant (fragrance-free)

**SINEPRINT®**
Skin protection cream for working with sensitive surfaces where greasy fingerprints have to be avoided, as well as for working with mechanically irritating substances.
- O/W emulsion
- non-greasy
- without mineral oil
- silicone-free
- perfumed
Many people are often exposed to sunlight and UV radiation – not only during their leisure time but also at work. In an occupational context, it is important to know that the requirements for skin protection products against natural UV radiation differ crucially from the requirements for preparations against artificial UVC radiation, e.g. in electric welding. Modern UV protection products often contain filters with silicone coating in order to prevent adhesion and skin whitening after application. Skin protection creams against artificial UVC radiation may not contain silicone if they are used in surface processing such as varnishing.
2. SKIN CLEANSING

Skin cleansing agents have to ensure efficient cleansing without straining occupationally stressed skin additionally. Therefore, an unnecessarily strong skin cleanser should never be used. In terms of product selection, the kind of dirt has to be considered in order to ensure an optimum effect in combination with maximum skin protection.

**LIGHT DIRT**

**STEPHALEN® FRESH FOAM**
Pleasingly perfumed skin-cleansing foam.
- blue foam concentrate
- very economical in contrast to wash lotions
- with moisturizing glycerin
- free from soaps and alkali
- with skin-neutral pH value
- slightly perfumed

**STEPHALEN® PURE**
Natural cleansing gel with sallow-thorn essence for the removal of light dirt on sensitive skin.
- especially compatible skin wash with natural and biological ingredients
- free from synthetic fragrances and colorants
- as shower gel also suitable for hair washing
- soap- and alkali-free
- skin-neutral pH value

**LIGHT DIRT**

**ECOSAN®**
Neutral cleansing syndet, also suitable for the food industry.
- transparent skin wash
- colorant-free
- soap- and alkali-free
- skin-neutral pH value
- fragrance-free
- HACCP-compliant

**SANIKLIN SOFT**
Gentle skin cleansing syndet especially suitable for offices and administration.
- pearly-coloured skin wash with sugar-based surfactants
- soap-free
- with skin-neutral pH value
- perfumed

**LIGHT AND MEDIUM DIRT**

**STEPHALEN® VITAL**
Gentle hair and skin cleansing gel for the removal of light and medium dirt.
- high-quality shower gel with sugar-based surfactants
- colorant-free
- soap- and alkali-free
- skin-neutral pH value
- perfumed

Individual prophylaxis for sensitive or extremely stressed skin. Further information on pages 28-31.
2. SKIN CLEANSING

**MEDIUM DIRT**

**PHYSIODERM® ACTIVE PEARLS**
Skin cleanser with dirt-binding castor-oil wax pearls for the removal of medium dirt, e.g. oil, soot and metallic dust.
- with Active Soft Pearls® (ASP)
- particularly gentle to the skin, since free from abrasive scrubbing agents
- solvent-free
- skin-neutral pH value
- perfumed or fragrance-free

**TOPSCRUB® SOFT**
Skin cleanser with plastic scrubbing agents for the removal of medium dirt, e.g. oil, soot, graphite and metallic dust.
- strong cleansing power
- with plastic scrubbing agents
- solvent-free
- fragrance-free

Skin cleansing agents containing abrasive ingredients might be irritating to the skin. However, the cleansing with innovative dirt-removing agents made of hydrogenated castor oil (wax) leads to a reduction of skin irritation and signs thereof.
TOPSCRUB® NATURE
Skin cleanser with natural scrubbing agents for the removal of heavy dirt, e.g. oil, soot, graphite and metallic dust.
- strong cleansing power
- with walnut shell powder and sugar-based surfactants
- solvent-free
- perfumed

ACTIVE PEARLS® PLUS
High-performance skin cleanser with dirt-binding castor-oil wax pearls for the removal of heavy dirt, e.g. oil, soot, metallic dust and graphite.
- with Active Soft Pearls® (ASP) and a highly-efficient tenside combination
- particularly gentle to the skin since free from abrasive scrubbing agents
- solvent-free
- skin-neutral pH value
- fragrance-free

TOPSCRUB® EXTRA
Skin cleanser with plastic scrubbing agents for the removal of heavy dirt, e.g. oil, soot, graphite and metallic dust.
- very strong cleansing power
- with plastic scrubbing agents
- solvent-free
- perfumed

RAPITUFF®
Intensive skin cleanser with ester oil for the removal of highly adhesive, stubborn dirt, e.g. varnish, resins, adhesives, paint and bitumen.
- with skin-compatible solvent
- with plastic scrubbing agents
- perfumed

CONTRA COLOR®
Special hand cleansing paste for the removal of reducible dyestuffs.
- light beige paste
- with reduction and dirt-carrier agent
- solvent-free

Individual prophylaxis for sensitive or extremely stressed skin. Further information on pages 28-31.
3. SKIN CARE

NORMAL AND SLIGHTLY STRESSED SKIN

CURA SOFT
Skin care emulsion for normal and slightly stressed skin.
- for hands and facial application
- moisturizing O/W emulsion
- with bisabolol and rice germ oil
- quickly absorbed
- slightly greasy
- without mineral oil
- silicone-free
- perfumed

DRY AND STRONGLY STRESSED SKIN

CUREA SOFT
Moisturizing skin care cream for strongly stressed and dry skin.
- for hands and facial application
- O/W emulsion containing urea, rice germ oil and bisabolol
- quickly absorbed
- slightly greasy
- without mineral oil
- silicone-free
- perfumed or fragrance-free
- HACCP-compliant (fragrance-free)

VERY DRY AND EXTREMELY STRESSED SKIN

PHYSIODERM® CREME
Highly-effective skin care cream for extremely stressed and very dry skin.
- for hands and facial application
- regenerative W/O emulsion
- with high lipid level, intensively lipid-replenishing
- also recommended as concomitant skin care for the therapy of irritated skin
- silicone-free
- perfumed

CARE PURE
Intensive skin care cream with natural oils and sallow-thorn essence for extremely stressed and dry skin.
- for hands and facial application
- O/W emulsion, with protection against free radicals
- balances moisture and lipid loss
- free from preservatives
- without mineral oil
- silicone-free
- fragrance-free

Individual prophylaxis for sensitive or extremely stressed skin. Further information on pages 28-31.
Skin care products are applied after work on cleaned skin.

They support the regeneration capability of the skin and renew the skin’s natural protective barrier.
**DISINFECTANTS**

**GENTLE HAND DISINFECTION**

**MYXAL® SEPT GEL**  
Hand sanitizing gel for hygienic hand disinfection.  
- VAH-listed  
- based on ethanol  
- bactericidal  
- yeasticidal  
- virucidal  
- re-moisturizing  
- fragrance-free  
- HACCP-compliant

**MYXAL® SEPT 80**  
Fluid hand sanitizer for hygienic hand disinfection.  
- VAH-listed  
- based on ethanol  
- bactericidal (including MRSA)  
- yeasticidal  
- tuberculocidal  
- virucidal  
- re-moisturizing  
- fragrance-free

**HAND DECONTAMINATION**

**MYXAL® HD**  
Lotion for hygienic handwash in hospitals, residential care homes, kitchens, laundries and the food industry.  
- VAH-listed  
- bactericidal  
- re-moisturizing  
- excellent skin compatibility due to polyhexanide  
- fragrance-free

**DISINFECTION WIPES**

**INCLUDAL® WIPES**  
Alcoholic wet wipes for the rapid disinfection and cleaning of surfaces and hands.  
- bactericidal (including MRSA)  
- yeasticidal  
- fragrance-free  
- residue-free

**Disinfection agents** are additionally used in order to prevent the transmission of germs on products, human beings or manufacturing facilities. The basic principle: The disinfectant ingredients should not unnecessarily stress or affect the skin or the treated surfaces.

Use biocides safely. Always read the label and product information before use.
INCLUDAL® ANTISEPT
For disinfection of surfaces and items, e.g. breathing masks.
- VAH-listed
- quickly-drying and residue-free
- antibacterial and antimycotic effect
- fragrance-free
- HACCP-compliant

MYXAL® FOOT SPRAY
For disinfection of shoes, socks, professional clothing as well as for the prevention of athlete’s foot.
- alcohol-free (non alcoholic) pump spray
- antibacterial and antimycotic effect
- good skin compatibility
- fragrance-free

MYXAL® S CONCENTRATE
For disinfecting floors and objects (e.g. bath mats/grates, benches, tiles) and for the prevention of athlete’s foot.
- based on cationic surfactants
- antibacterial and antimycotic effect
- fragrance-free
Simple, economical and appropriate application of the products can only be achieved by dispensers that are perfectly adapted to the chosen skin protection products. In this way, efficiency on the one hand, and highest acceptance among users on the other hand, can be ensured.

**PHYSIOMAT® MULTI**
Universal dispenser for 1000-ml- and 2000-ml-collapsible bottles.
- made of stainless steel
- easy loading
- ideal dosage
- maximal hygiene since there is no direct contact between product and dispenser
- also available in a lockable version

**PHYSIOMAT® VARIO ECO**
Universal dispenser for 1000-ml- and 2000-ml-collapsible bottles.
- made of robust plastic
- easy loading
- ideal and adjustable dosage
- maximal hygiene since there is no direct contact between product and dispenser
- optionally lockable

**EURO SYSTEM**

**DISPENSER UNI 10 V**
**DISPENSER UNI 10 L**
Dispensers made of metal, suitable for 1-litre-hard-bottles.
The difference between both dispensers is that UNI 10 L has a long lever. Therefore, it is especially suitable for dispensing disinfection agents.
NEPTUNE-SYSTEM

NEPTUNE STANDARD
Dispenser for Physioderm®’s 1-L-Neptune-bottles.
- manual handling
- made of plastic
- available in black or white design
- easy loading
- ideal dosage
- good emptying
- maximal hygiene since there is no direct contact between product and dispenser
- optionally lockable
- black or white drip tray available

NEPTUNE TOUCHLESS
Dispenser for Physioderm®’s 1-L-Neptune-bottles
- automatic, touch-free handling
- made of plastic
- available in black or white design
- easy loading
- ideal dosage
- good emptying
- maximal hygiene since there is no direct contact between product and dispenser
- optionally lockable
- black or white drip tray available

NEPTUNE STAINLESS STEEL
Dispenser for Physioderm®’s 1-L-Neptune-bottles.
- automatic, touch-free handling
- made of stainless steel
- easy loading
- ideal dosage
- good emptying
- maximal hygiene since there is no direct contact between product and dispenser
- lockable
- drip tray available
Almost 100 years of competence and experience stand behind the Physioderm® program for occupational skin protection. It is our ultimate ambition to avoid occupational dermatitis. For this reason, we pursue an integrated approach to emphasize not only the dermatological effectiveness, but also the practical usability. We constantly work on new, more efficient and user-friendly solutions. As a result, we are proud to offer innovative concepts and high quality products.

Innovative Solutions Concerning Skin Protection

Gentle skin cleansing
With Active Soft Pearls®, Physioderm® developed an alternative to abrasive scrubbing agents like sand or powder made of walnut shells or plastic.

Safety
All ingredients of NUTRI SAFE are considered food additives. This allows Physioderm® to offer effective before work products for the foodservice and food processing industries.

Dermatological efficiency
Due to its ingredient luteolin, the innovative skin protection cream PROTEXSAN prevents the danger of inflammation which is caused by the formation of free radicals. Free radicals belong to the most important reasons for skin irritations on a cellular level. According to the latest scientific findings, free radicals contribute to the pathogenesis of irritant and allergic contact dermatitis as well.

From The Beginnings Up To Now

In 1885, Albert Boehringer acquired a small tartar-factory in Ingelheim/Rhine in order to produce pharmaceutical raw materials. As a result of this small factory, the foundation of Physioderm® as experts in skin care began. Boehringer Ingelheim had already had over 40 years experience in health industries, when in 1929, the second regulation extending accident insurance to work related injuries and dermatitis went into effect. In the 1950's, Boehringer’s subsidiary Basotherm was founded and established as a leading provider of dermatological products. With its brands stephalen®, sansibal® and physioderm®, the company set high standards for occupational skin care.

In 1995, the history of Physioderm® as an independent company began: Basotherm’s occupational skin care products and programs were spun off and started operating under the name of Physioderm GmbH & Co. KG. In 2008, the merger with Peter Greven Hautschutz GmbH & Co. KG led to an even more comprehensive product range and competence in the professional skin care industry. Currently, the globally operating company Peter Greven Physioderm GmbH considers itself a leader in innovation.

Approved Principles For The Future

Since the beginning in the former tartar factory, many things have changed, but our principles always remained the same. Continuous innovation, customer acceptance and loyalty as well as an uncompromising commitment to quality are the reasons why Physioderm® will continue to offer innovative and effective state-of-the-art concepts for protection, cleansing and care of occupationally stressed skin. The result: a safer and healthier workplace.
History Of Occupational Dermatology

Since the 1950’s
Occupational dermatitis and its prevention become an increasing focus of interest for dermatologists

1929
Skin diseases caused by specific substances are explicitly accepted in accident insurance

1922
Publication of the book “Die Schädigungen der Haut durch Beruf und gewerbliche Arbeit” (The Skin’s Damage due to Profession and Industrial Work), edited by Moritz Oppenheim, J.H. Rille and Karl Ullmann; major focus is put on dermatitis caused by physical stimuli like heat, cold, compressed air and radiation

1884
Introduction of the accident insurance within the framework of Bismarck’s social legislation. Initially, only occupational accidents are covered

1845

1775
First scientifically described occupational skin disease: Sir Percivall Pott publishes his studies on chimney-sweepers suffering from scrotal cancer and relates the disease to soot

1936
Extension of the accident insurance to all severe and recurring skin diseases leading to career change or occupational disability

1925
Occupational diseases caused by radiation or specific substances are added to the accident insurance; although skin cancer is considered, skin diseases are not explicitly mentioned

1911
Turning point in the research on contact dermatitis: the publication of “Wesen der Iodoformidiosynkrasie” (The Nature of Iodoform Idiosyncrasy) by Bruno Bloch creates a systematic test method

1856
Ferdinand von Hebra describes contact dermatitis as a special occupational strain and creates a classification for the treatment of skin diseases; he writes the books “Atlas der Hautkrankheiten” (The Atlas of Skin Diseases, 1856) and “Lehrbuch der Hautkrankheiten” (The Textbook of Skin Diseases, 1878 with Moritz Kaposi)

19th century
Occupational diseases become their own domain; the identification of their reasons gives rise to industrial hygiene
Functions Of The Skin

With a surface of about two square meters, the skin is the biggest human organ. It is not only the body’s outer cover, but also carries out a multitude of important tasks. As a barrier, it protects the body from mechanical, chemical and thermal influences, softens the harmful effects of sunlight and wards off microorganisms. The skin regulates the body-heat balance and serves as storage of greases, carbohydrates, water and salts. Basic metabolic processes take place inside the skin. Most importantly, the skin forms the outer appearance of a human being and therefore, it is very important for social life and self-perception.

The Pathogenesis Of Dermatitis At Workplace

90 percent of all occupational skin diseases are irritant and allergic eczema caused by the direct contact with hazardous substances. These substances are often only slightly skin irritating, but over time, the delayed effects from repetitive irritation may cumulatively damage the skin. The outer layer of the skin is the horny layer, which serves as a barrier against chemical and physical influences. Water and fat-dissolving materials like tensides and organic solvents loosen the building blocks of the horny layer and undermine its barrier function. Due to these damages, the skin increasingly loses water, dries out and becomes rough and chapped. Moreover, hazardous substances and potential allergens can be absorbed more easily into the skin and may cause further damage. A healthy horny layer continuously regenerates; the dead epithelial cells of the horny layer are always being replaced. However, repeated irritation also attacks and damages the skin’s ability to heal itself. This may result in chronic skin disease.

Dermatitis – The Most Frequent Occupational Disease

Occupational skin diseases are by far the most frequent health risk at work. More than 25 percent of all occupational diseases are skin related. Between the ages of 15 and 25, the percentages even rise as high as 90 percent. Many occupational dermatitis issues run a chronic course, especially if they are not recognized and treated in time.
Skin Protection And Prevention: A Lega Obligation For Every Employer

The German Occupational Safety and Health Act obliges employers to take appropriate measures against work-related health risks. According to the European PPE User Directive, occupational skin protection agents are regarded as a part of the personal protective equipment (PPE).

In case of an imminent occupational disease, the costs for skin protection agents can be borne by accident insurance if requested by a physician. Quite often, loss of social status is the result.

In addition to the occupational difficulties, affected persons suffer from considerable restrictions in their everyday life. Serious skin diseases reduce quality of life as severely as the consequences of a cardiac infarction or an apoplectic stroke. Furthermore, the disfiguring effect of many dermatitis cases may have a negative psychological impact resulting in withdrawal from society and depression.

Development Of Selected Occupational Diseases “5101 Skin Diseases”

source: European Agency for Safety and Health at Work (EU-OSHA)
Prevention is the best medicine – a principle that also holds true for occupational skin diseases. Skin protection products consequently applied is the best solution to maintain the health of strongly stressed skin. In order to be effective, the protective measures have to be taken right from the beginning of the occupational skin exposure. If skin diseases already occurred, it may already be too late to avert a case of dermatitis.

An efficient occupational skin protection concept includes preliminary measures applied before work as well as the most gentle cleansing possible and an effective care after performing the stressing activities. In this regard, all measures have to be adapted to each other as well as to the health hazards of the respective work performed.

The Three Pillars Of An Integrated Skin Protection Concept
- skin protection (preventive measure)
- skin cleansing
- skin care (regenerative measure)

Skin Protection
Most of the strains the skin is exposed to during work result from direct contact with potentially hazardous substances. Skin protection products prevent these specific substances from entering the skin. The protective lotions, creams and gels are applied before work and operate together with the natural horny layer of the epidermis in order to establish an effective barrier against hazardous substances. Essential for an efficient protection is the exact knowledge of the substances the skin is exposed to during work. Usually, there is no universally applicable and effective skin protection agent. Therefore, the applied products have to be chosen in exact accordance with the hazardous substances constituting a skin danger at the respective workplace.

Skin Cleansing
The choice of the right skin cleansing agent is of great importance. Skin, which is already occupationally stressed, must not be strained by the cleansing agent additionally. However, at the same time, dirt – and hence, hazardous substances – have to be completely removed. As a rule of thumb: the higher the cleansing effect of a product, the higher the possible skin strain. For this reason, an unnecessarily strong skin cleanser should never be used. In terms of product selection, the kind of dirt has to be considered in order to ensure an optimum effect in combination with maximum skin protection.

In some companies, it might be reasonable to provide several skin cleansing agents which are graded according to efficiency and which can be applied as required. Thus, an unnecessarily strong product will not be used.

<table>
<thead>
<tr>
<th>Product</th>
<th>Skin Stress</th>
<th>Application Area</th>
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<tbody>
<tr>
<td>Liquid skin cleansers (soaps and syndets)</td>
<td>low</td>
<td>light dirt</td>
</tr>
<tr>
<td>Skin cleansers with smooth and soft dirt-removing agents</td>
<td>low</td>
<td>heavy dirt (e.g. greases, oils, lubricants, soot)</td>
</tr>
<tr>
<td>Skin cleansers with sharp-edged, abrasive scrubbing agents</td>
<td>high</td>
<td>heavy and extreme dirt (e.g. greases, oils, lubricants, soot)</td>
</tr>
<tr>
<td>Skin cleansers containing solvents</td>
<td>extremely high</td>
<td>highly-adhesive dirt (e.g. colorants, varnishes, paints and adhesives)</td>
</tr>
</tbody>
</table>
Skin Care

As the third pillar of an integrated skin protection concept, skin care products ensure, with their regenerative features, that the barrier function of the stressed epidermis is sustained in the long term. Skin care creams are applied to the previously cleaned skin after work; they bind water within the skin and contain fat and oil, which smooth the horny layer. As a result, skin care products compensate for the loss of moisture from stress, water, detergents or fat-dissolving substances.

Preparation And Implementation Of An Integrated Skin Protection Concept

1. Definition of work and work area
   - Which activity does the employee perform exactly?

2. Identification and evaluation of potential skin hazards
   - Is there a hazard due to direct or indirect skin contact? (TRGS 401*)
   - Are there mechanical, biological or physical hazards?

3. Identification and realisation of protective measures
   - Substitution of hazardous substances, if possible
   - Technical protective measures (e.g. closed system)
   - Organisational protective measures (e.g. clean and tidy workplaces)
   - Personal protective measures (Personal Protective Equipment)
   - Regular occupational health checks, if applicable
   - Comprehensive instruction of employees
   - Clear marking of workplaces and dispensers with the help of pictograms

4. Documentation
   - Documentation of risk assessment in writing
   - Preparation of operating instructions, group data sheets, etc.
   - Preparation of hand protection and skin protection instructions

5. Supervision of efficiency
   - Regular examination of realised protective measures
   - Regular examination whether the employees comply with the protective measures

* The Technical Rule for Hazardous Substances TRGS 401 "Risks resulting from skin contact – identification, assessment, measures" specifies the requirements and assertions of the Ordinance on Hazardous Substances concerning skin-stressing activities more precisely.
OCCUPATIONAL SKIN PROTECTION TODAY

The general requirements for occupational skin protection have fundamentally changed in the last decades. On the one hand, the industrial restructuring led to a reduction of the average dirt level. On the other hand, highly qualified workers encounter new working materials, which might stress the skin. Furthermore, the population’s increasing skin sensitivity from environmental influences (atopy) can be noticed.

Realistic Effectiveness Tests

Occupational skin protection is on the move. Contrary to previous assumptions, skin protection products do not merely have a physical effect by laying a protective film on the skin. Rather, their ingredients interact with the horny layer of the epidermis – a complex interaction and a circumstance that makes it even more important to test skin protection products with the most practical relevance. This is the only way to prove their effectiveness reliably. The best methods are in vivo-studies like the Repetitive Irritation Test (RIT). The RIT simulates the situation at workplaces with test persons who repetitively apply skin protection agents and skin-irritating working materials over a longer period of time.

Focus On Skin Cleansing

Although preventive skin protection agents have been the focus of research for a long time, currently, more emphasis is placed on the development of optimised skin cleansing products as well. For many years, most of the attention has been paid to the elimination of solvents. Therefore, the further development of scrubbing agents stagnated. This was a mistake since abrasive skin cleansing agents for heavy dirt often contain hard, sharp-edged scrubbing agents which have the potential to cause dermatitis. A study by the dermatological clinic of the University of Erlangen recently proved the damaging effect of hard scrubbing agents made from walnut shell powder, as well as the considerably better skin compatibility of an innovative alternative: soft pearls made of hydrogenated castor oil which remove dirt without damaging the skin.

Active Soft Pearls®

Active Soft Pearls® (ASP) are wax pearls made of hydrogenated castor oil, which are characterised by a soft and smooth surface. ASP do not support the cleansing process merely by mechanical rubbing like abrasives, but primarily by their lipophilic surface structure which is able to bind oily dirt particles. The skin cleansing products PHYSIODERM® ACTIVE PEARLS® and ACTIVE PEARLS® PLUS contain ASP.

“Castor wax beads constitute a novel non-irritating alternative for abrasive cleaning of recalcitrant oily skin contamination appropriate for individuals with an atopic skin diathesis […].”

Research by Prof. Dr. med. V. Mahler, dermatological clinic of the University of Erlangen

The English version of the research has been published in the British Journal of Dermatology (BJD), Volume 162, Number 4, April 2010.

Left: healthy skin
Right: damaged skin

In contrast to walnut shell powder, wax pearls remove dirt without affecting or damaging the skin.
Fragrance-Free Products As A Special Solution

More and more people are allergic to perfume – but the inherent smell of fragrance-free products often appears to be unpleasant. Therefore, many users do not accept fragrance-free agents in practice. The result: either they use the skin protection products insufficiently or they switch to products of their choosing. However, the best skin protection concept is useless, if it is not applied consistently. For this reason, fragrance-free products primarily serve as an alternative for employees with known fragrance allergies. They are useful as a single solution, if a high perfume exposure already exists or an odor transfer needs to be excluded.

Environmental Protection And Sustainability

Environmental awareness plays an increasing role in occupational skin protection. The growing demand for ecologically responsible products leads to an increasing range of products that save the skin and the environment as well. Instead of mineral oil, manufacturers increasingly often choose oils, fats and waxes based on natural and renewable raw materials, e.g. olive oil, rice germ oil or beeswax.

Fragrance-free Physioderm® products available:
SANIWIP®, SANIWIP® F, DUALIN®, PHYSIO UV 30 SUN, PHYSIO UV 50 SPRAY, PHYSIO UV 50 PLUS, NUTRI SAFE, PROGLOVE, PROTEXSAN, ECOSAN®, STEPHALEN® PURE, TOPSCRUB® SOFT, ACTIVE PEARLS® PLUS, CUREA SOFT and CARE PURE

Physioderm® products without mineral oil:
DUALIN®, SANSIBON®, SINEPRINT®, PHYSIO UV 30 SUN, PHYSIO UV 50 SPRAY, NUTRI SAFE, PROTEXSAN, CURA SOFT, CUREA SOFT and CARE PURE

The Myth of “without preservatives”

Most of the industrially produced skin protection products have to be preserved with the help of preservative agents. In order to create an impression of special skin compatibility, substances, which do not have to be declared as preservatives, are occasionally used. However, these substances, e.g. essential oils, are anything but generally more compatible than ingredients under the duty of declaration; many of them even have a higher allergenic potential.
INDIVIDUAL PROPHYLAXIS FOR SENSITIVE OR EXTREMELY STRESSED SKIN

The product line Physioderm® sensitive nature, which includes PROTEXSAN – the innovative protection cream with luteolin – has especially been developed for persons with extremely stressed, atopic and already irritated skin. If the sensitive nature products are consequently applied, they will even be able to prevent the irritation of sensitive or extremely stressed skin. The product line is characterized by the fact that all formulations are based on natural active ingredients. The Physioderm® sensitive nature products offer companies a sustainable alternative to protect the environment and their employees’ skin at the same time.

Physioderm® sensitive nature at a glance

• suitable for primary prevention in case of sensitive skin
• therapy-concomitant concept for skin protection, skin cleansing and skin care
• especially skin-compatible
• natural and biological ingredients
• fragrance-free and colorant-free
• free from mineral oil and silicones
• without preservatives and emulsifiers whenever possible

PREVENTION Is The Best Medicine

Adequate skin protection prevents people with occupationally extremely stressed hands from developing eczema. Due to appropriate protection, already irritated skin is saved from further damages and is supported in its regeneration process. Skin protection is a preventative measure and not a therapy in case of an existing disease. However, in the course of therapy, especially while being reintegrated at the workplace, skin protection products can be applied additionally.

90 percent of all cases of dermatitis are irritant and allergic eczema which are caused by the skin’s direct contact with harmful substances.
A Main Reason For Skin Cell Damages: Free Radicals

Free radicals rank among the most important reasons for skin damages on a cellular level. According to the latest scientific findings,1 free radicals contribute to the pathogenesis of irritant and allergic contact dermatitis as well.

The Formation Of Free Radicals Inside Of The Skin

Free radicals are atoms or molecules which have at least one unpaired electron. Due to ordinary metabolic processes, they arise from molecular oxygen inside of the body. Different factors contribute to their occurrence inside of the skin – next to UV radiation, especially the impact of detergents, allergens and other skin-irritating substances is an important aspect.

Due to their high reactivity, free radicals damage proteins, lipids and important molecules such as RNA and DNA. Healthy cells are able to render dangerous particles harmless. However, a concentration of free radicals, which is too large, overexerts the repair and detoxication capacities of the cells and results in oxidative stress: an injury of cellular and extracellular macromolecules.

Effective Protection Against Working Materials And Free Radicals

Occupationally extremely stressed hands are in need of comprehensive protection – this will be even more necessary if the skin is already stressed and irritated. The innovative skin protection cream PROTEXSAN protects sensitive or extremely stressed hands in an especially efficient way. The cream does not contain emulsifiers and regenerates the skin's barrier because of skin-related ceramides and a new lamellar structure which is similar to the structure of the epidermis. Moreover, the cream uses the antioxidant properties of the natural substance luteolin in order to counteract aggressive oxygen radicals effectively. Additionally, PROTEXSAN does not only protect hands from the working materials they are in contact with in professional everyday life. The luteolin contained also reduces the inflammation risk which is caused by the formation of free radicals.

HIGHLY EFFECTIVE NATURAL ANTIOXIDANT

The natural substance luteolin is extracted from the medicinal plant Reseda luteola and it is one of the most effective antioxidants in the plant kingdom. Luteolin does not only protect sensitive or extremely stressed skin from free radicals, it also protects the skin from the irritation caused by irritant and potentially allergenic substances. Furthermore, luteolin operates in an anti-inflammatory way, it absorbs UV radiation and it stimulates the formation of collagen.

A skin protection cream containing luteolin is ideally suitable for people whose hands are repeatedly exposed to water and water-soluble working materials in the course of their professional activities.

Strong Combination: Luteolin, Q10 and Vitamin E

Various antioxidants protect each other and create a network inside of the skin which absorbs free radicals. A combination of luteolin and other radical scavengers is able to potentiate the ingredient’s effect many times over. Thus, PROTEXSAN maximizes the protection against free radicals because of the combination of the patented flavonoid extract taken from Reseda luteola (Luteolin) and the body’s own antioxidants vitamin E and coenzyme Q10.

Reseda luteola: Healing Power from Nature

In Central Europe, the plant Reseda luteola, which is also known as weld or wild mignonette, is used as a medicinal plant since the 18th century. Even the plant’s name is based on its effectiveness, because „reseda” is the imperative of the Latin verb „resedare”, “to heal”. Possibly, the name traces back to a spell which was spoken while applying the plant in order to strengthen its effect: “reseda morbos, reseda!” ("Heal the disease, heal!"))
Dermatologically – Proved Protective Effect of Luteolin

In the course of a project which has been granted by the German Federal Ministry of Economics and Technology, the Department of Dermatology at the University of Freiburg developed an innovative skin protection cream containing luteolin. As a result of this project, Prof. Dr. C. Schempp and Prof. Dr. W. Gehring observed that luteolin is able to protect human skin effectively. The dermatologists ascribe the natural substance’s outstanding protective effect to properties which are UV-absorbing, DNA-protecting, antioxidant, anti-inflammatory and protecting the skin’s extracellular matrix.

In the repetitive washing test, the skin protection cream PROTEXSAN with luteolin showed a superior protective effect – also in comparison to other preparations. During the test period, PROTEXSAN was the only product which even improved the hydration of the skin’s horny layer.

Anti-Inflammatory Effect

The repetitive washing test on untreated skin led to an increasing inflammatory reaction which was documented as an increase of the cutaneous blood flow. PROTEXSAN prevented the increase of cutaneous blood flow completely on day three and reduced it in the clearest way on day seven.

Protection Against Transepidermal Water Loss

The repetitive washing test on untreated skin led to a statistically significant loss of stratum corneum moisture. Despite the repetitive washing, PROTEXSAN was the only formulation which improved stratum corneum moisture at both observation points.

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2 cf. Zentrales Innovationsprogramm Mittelstand (ZIM), AiF grant no. KF2556501SK0, „Entwicklung einer Hautschutzserie mit patentiertem Flavonoid-Extrakt aus Reseda luteola für den gewerblichen Hautschutz im industriellen Umfeld“, Final Report of the Department of Dermatology, University Medical Centre Freiburg, Prof. Dr. C. Schempp and Prof. Dr. L. Bruckner-Tuderman. 2012.


4 cf. ibid.

5 cf. ibid.

6 cf. ibid.
The prevention of occupational skin diseases is a complex mission, which requires far more than merely compatible products. Skin protection only works as a comprehensive and integrated concept. It demands various measures which have to be determined, coordinated and implemented in a consistent as well as in an organized way. Consideration must always be given to the specific requirements of every single workplace and employee.

In order to support companies in effective skin protection, Physioderm® offers a comprehensive range of products and services – while additionally providing almost 90 years of experience in the domain of occupational skin protection.

Uncompromising Quality from A to Z

Excellent compatibility and highest efficacy – these are the two basic principles behind every Physioderm® product. These are simple principles with far-reaching consequences, especially in terms of ingredient selection, product development, product manufacturing as well as extensive product testing.

The raw materials of Physioderm® products are carefully chosen. As a matter of course, all raw materials correspond to the requirements of the Cosmetics Regulation and in parts also to the stricter requirements of the Pharmacopoeia. Rigorous quality controls and microbiological tests along the entire production process ensure that the end product always satisfies the highest requirements.

To be sure, the Physioderm® products are not only tested according to the most modern procedures in the in-house laboratory, but also by neutral external institutes.

Physioderm® uses a strict quality management and certification system for its production: DIN EN ISO 9001. In addition, Physioderm® established an environmental management system which is certified according to the international norm DIN EN ISO 14001 and which ensures the highest possible sustainability.

Focus on Cost Effectiveness

By preventing occupational dermatitis, modern skin protection concepts reduce loss of manpower and sales. Good skin protection costs money. These costs have to have a perceived value for the benefits received.

Physioderm® helps companies do a profitability calculation in addition to creating a skin protection concept exactly meeting all workplace requirements. Furthermore, Physioderm® continuously looks for ways to save its customers money. Innovative concepts and formulations as well as efficient corporate structures allow for economical prices for high quality products.

Contact

The Physioderm® customer service team is gladly available for all inquiries and information concerning occupational skin protection. Your direct contact persons can be found on www.physioderm.com/en/contact
Phone: +49 (0) 2251 77617-0 (during office hours)
e-Mail: info@physioderm.de
Competent Assistance In Risk Assessment

The first step on the way to an effective skin protection concept is a risk assessment, which includes all potential strains and risks the employee’s skin might be exposed to. Only on the basis of this risk assessment, it is possible to determine appropriate protection measures. In order to support companies in conducting a risk assessment, Physioderm® will send an experienced local representative to the company. In cooperation with the persons in charge, our experts analyse the risks of each workplace and prepare skin protection programs, which consider the specific requirements of the respective company.

Concepts In Practice

No product can protect the skin, if it is not applied. In order to facilitate the step from theory into the practice of everyday working life, Physioderm® offers services and supportive devices that increase the acceptance and thus, the effectiveness of skin protection agents significantly – e.g. practice-related dispensers simplifying the application of skin protection products. In order to prevent confusion, all Physioderm® products bear a symbol indicating their application area. Dispensers can also be labelled individually. In addition, Physioderm® provides product samples on request in order to give companies the possibility to test the product acceptance and effectiveness without running a financial risk.

Crucial Point: The Employee

Well-informed and motivated employees are an essential factor for the success of skin protection concepts. With the help of advisory services and on-site trainings, Physioderm® systematically communicates the application and the effect of occupational skin protection agents. Regular local activities and informative events create an awareness for employees about occupational skin protection.