



HAKA KUNZ

Decontamination in Nuclear Power Plants

HAKA Kunz – Your Qualified Partner

- Products for cleaning and decontamination
- Products for decontamination of persons and skin prophylaxis
- Products for decontamination in dismantling



More than
50 years
of experience in
decontamination

About HAKA Kunz GmbH

HAKA offers a sophisticated product portfolio of chemical decontamination agents for application on components, surfaces and laundry, for the decontamination of persons and for use in dismantling. Our experts are at your disposal for any queries and they are pleased to give advice on-site.



HAKA Kunz GmbH, located in Waldenbuch, Baden-Wuerttemberg, south-west Germany, had been founded in 1946 by Hans and Helene Kunz when having invented the original HAKA Neutral soap. Since then HAKA stands for environment-friendly and skin-caring products that are highly efficient, economical and versatile for the sector of household, laundry and body care.

In the early 1970s HAKA expanded its field of activities by a new division: The decontamination of radioactive surfaces in the nuclear technology. At that time HAKA had already been a member of the committee for radioactive waste management according to DIN standard.









In close collaboration with nuclear power plants in Germany and Switzerland chemical decontamination methods were developed, exactly tailored to the needs and requirements of the nuclear plants. A sophisticated product portfolio was created consisting of chemical decontaminants for components, surfaces, laundry and for decontamination of persons, which is constantly being adjusted to the changing requirements.

Because of the in-house development and production HAKA has extensive knowledge and is able to quickly and agilely adapt to new challenges.

What does **HAKA** offer?

HAKA offers products for cleaning and decontamination in the following application fields:

NUCLEAR POWER PLANT CONTROLLED AREA

- | | | | | | |
|---|---|--|---|--|--|
| 1 |  | STEEL COMPONENTS
Parts, pumps, tools, piping ... | 3 |  | LAUNDRY |
| 1 |  | COMPONENTS FROM
NUCLEAR POWER PLANTS
BEING DISMANTLED | 4 |  | HEALTH AND
SAFETY EQUIPMENT |
| 1 |  | REACTOR POOLS,
FUEL POOLS | 5 |  | DECONTAMINATION
OF PERSONS |
| 2 |  | FLOORS, WALLS,
SURFACES | 6 |  | DISMANTLING |



Special expertise in decontamination in nuclear power plants

OUR SERVICE

- Individual product advice for special requirements
- Personal support on site
- Training of your personnel
- Needs-based recipe modification

OUR PRODUCTS

- 1. Our products are particularly low corrosive and gentle on the materials of the devices (e.g. evaporators)**
 - Low corrosive active substances
 - No halide compounds are part of the formulation (chloride, fluoride, etc.)
 - The chloride content of our products is monitored in our laboratory
- 2. The products are suitable for the waste water treatment in evaporators – they meet the required criteria for the management of radioactive waste water**
 - Use of primary low foaming surfactants
 - Minimization of steam volatile components
 - No water-insoluble or partially soluble components
 - No sublimating constituents
 - No ammonium compounds

- No nitrite- or nitrate compounds
- No fillers
- Use of ingredients with thermic stability up to 250 °C

3. Products are listed by Framatome and VGB

framatome



- PowerTech**
- 4. Products are successfully being used in nuclear power plants in Germany for many years**
 - 5. The individual and targeted development in cooperation with the specialists from the nuclear power plants ensures a high cleaning and decontamination performance**
 - 6. Specially aligned portfolio for dismantling**

Application fields



CLEANING AND DECONTAMINATION OF

1

- **STEEL COMPONENTS** (SUCH AS PARTS, PUMPS, TOOLS, PIPING ...)
- **COMPONENTS FROM NUCLEAR POWER PLANTS BEING DISMANTLED**
- **REACTOR POOLS, FUEL POOLS**

	CHARACTERISTICS / APPLICATIONS	PRODUCTS
Grease, oil and particle soiling (alkaline decontamination)	ALKALINE CLEANING <ul style="list-style-type: none"> • Removes oil and grease staining as well as particles and persistent coatings • Removes the contamination bound to dirt particles 	<ul style="list-style-type: none"> • Ibell Ex • Dekopur • Ibell Ex PFR • Dekopur N 100 • Dekoclean • Dekopur RO
Mineral contamination, removal of nuclides (acidic decontamination)	ACIDIC CLEANING <ul style="list-style-type: none"> • Removes mineral contaminations (e.g. oxides), corrosion residues and radioactive fission products • Acts in depth, even on hard surfaces such as stainless steel 	<ul style="list-style-type: none"> • Dekopur FS 500 • Dekowet • Dekopur RS-X

The products are also suitable for use in immersion baths and ultrasonic baths.

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CLEANING AND DECONTAMINATION OF FLOORS, WALLS, SURFACES



	EIGENSCHAFTEN/ANWENDUNGEN	PRODUCTS
Regular cleaning with neutral detergent	NEUTRAL CLEANING <ul style="list-style-type: none"> • Particularly suitable for regular cleaning at a normal soiling with lightly adhering dirt particles • Gentle to the surface, removes radioactive contamination at lightly adhering particles and grinding dust • For floors, walls and surfaces of any kind 	<ul style="list-style-type: none"> • Dekoneutral
Basic cleaning and maintenance cleaning	ALKALINE CLEANING <ul style="list-style-type: none"> • Removes normal soiling, more persistently adhering dirt and coatings as well as adhering radioactive contamination • Also suitable for aluminium surfaces 	<ul style="list-style-type: none"> • Dekopur N 100
Cleaning at light soiling but persistent radioactive contamination	ACIDIC CLEANING <ul style="list-style-type: none"> • Removes mineral contaminations (e.g. oxides), corrosion residues and radioactive fission products from floors and walls 	<ul style="list-style-type: none"> • Dekopur RS-X

Please contact us for an individual consultation.

Application fields

3 CLEANING AND DECONTAMINATION OF WORKWEAR (LAUNDRY)



	CHARACTERISTICS / APPLICATIONS	PRODUCTS
Powder detergent	<ul style="list-style-type: none"> • Decontamination washing powder for white and colourfast fabrics • With bleaching agent 	<ul style="list-style-type: none"> • Dekopur W-Oxo
Liquid detergent	<ul style="list-style-type: none"> • Liquid decontamination detergent for any type of washing machine and for all kinds of fibres 	<ul style="list-style-type: none"> • Hakania L 500 S • Hakania L 500 PFR-S • Hakania L 500 M • Hakania L 500 MS
Washing and decontamination enhancer	<ul style="list-style-type: none"> • Various products to enhance the washing and decontamination power of the detergents 	<ul style="list-style-type: none"> • Dekoper • Dekoplus • Dekoplus PFR • Dekoplus Liquid

4 CLEANING AND DECONTAMINATION OF HEALTH AND SAFETY EQUIPMENT



	CHARACTERISTICS / APPLICATIONS	PRODUCTS
Use in dishwasher and washing machines	<ul style="list-style-type: none"> • Liquid decontamination detergent for use in washing machines and dishwashers • Cleaning and decontamination of rubber, plastic and glass objects such as respirators, safety goggles, rubber gloves, laboratory equipment 	<ul style="list-style-type: none"> • Dekopur Automatic
Hand wash in dipping bath	<ul style="list-style-type: none"> • Liquid decontamination detergent for hand washing in dipping baths • Cleaning and decontamination of rubber, plastic and glass objects such as respirators, safety goggles, rubber gloves, laboratory equipment 	<ul style="list-style-type: none"> • Dekopur AS

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Application fields

5 DECONTAMINATION OF PERSONS AND SKIN PROPHYLAXIS



	CHARACTERISTICS / APPLICATIONS	PRODUCTS
Skin decontamination and cleaning	<ul style="list-style-type: none"> • Shower gel and cleaning paste for decontamination of skin and hair 	<ul style="list-style-type: none"> • Dekodusch S • Dekontafix • Septoman • Septoman fresh
Skin prophylaxis	<ul style="list-style-type: none"> • Semi greasy caring lotion for hands, face and body • With specially selected ingredients to stabilise the protective acid mantle of the skin and to support the protective barrier of the epidermis • Acts as a contamination protection 	<ul style="list-style-type: none"> • Hakalind

6 DISMANTLING



	CHARACTERISTICS / APPLICATIONS	PRODUCTS
Decontamination and cleaning of components from plants being dismantled	<ul style="list-style-type: none"> • Alkaline and acidic products for cleaning and decontamination of components from plants being dismantled 	<p>Various products from the existing range as well as some new products specially developed for the dismantling</p>



HAKA KUNZ

Do you have further questions?
We will be glad to advise you!

YOUR CONTACT PERSONS



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