

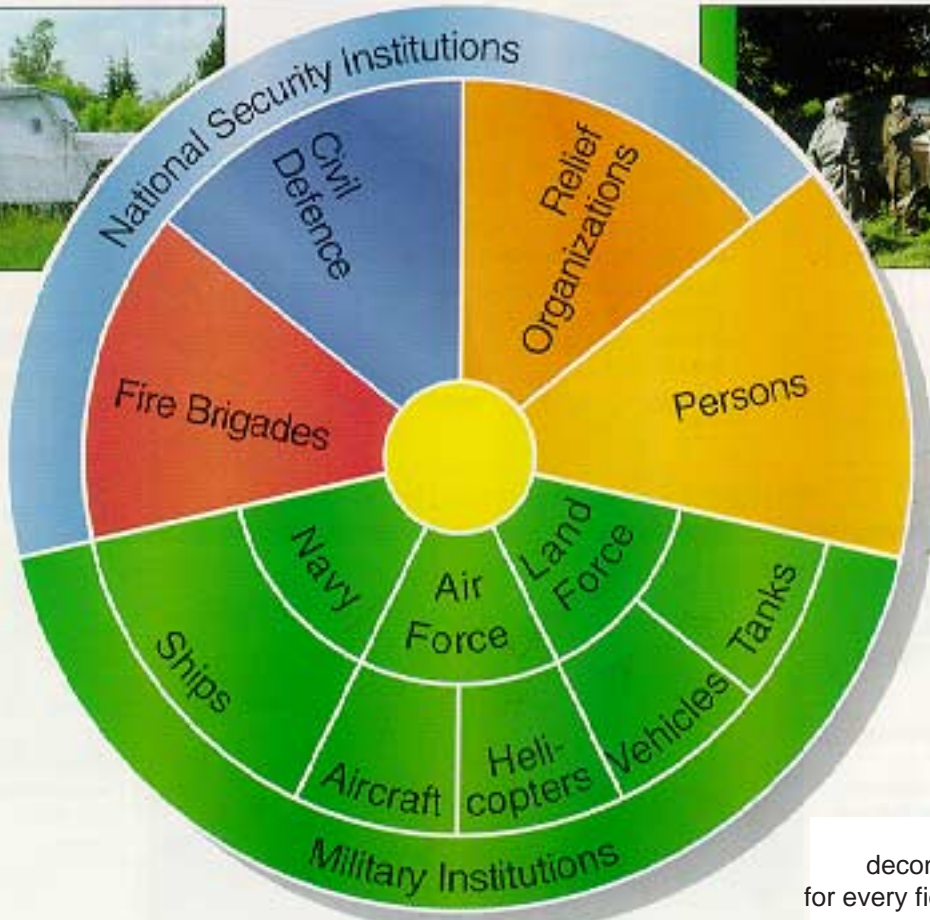
futuretech

 **Product Group 1**
Protection Systems

ISO 9001
Certified
Quality Assurance System
No. FM 12870

 **AQAP 110**

1.4.28 Decontamination Agents



The right decontamination agent for every field of application.

Guaranteed Safety in Accordance with German Armed Forces Standards

Radioactive Decontamination:

Removal of radioactive particles clinging to surfaces (fall-out)

Disinfection:

Neutralization of biological (disease causing) warfare agents

Detoxification:

Removal or destruction of chemical warfare agents

Material Decontamination

Radioactive Decontamination

The hot foam method guarantees safe radioactive decontamination. The hot foam is sprayed onto the surface at a temperature of 80°C. The complexing agent in the foam (RM 54) binds the radioactive nuclides (radioactive particles). The hot foam method guarantees the full radioactive decontamination of material.



Disinfection

The rendering harmless occurs with help of Di 60 or RM 35. By adding RM 54, the liquid Di 60 solution obtains a longer treatment time on contaminated surfaces, for example, weapon systems.



German patent

Patent holder:

Federal Republic of Germany,
Licence holder: Kärcher, Winnenden

Detoxification

The new decontamination emulsion TDE 202 works universally against all known chemical warfare agents and warfare agent mixtures with thickener.

Test conditions:

Contamination with following warfare agents and 180 min. reaction time:

- 13g/m² S-Lost(HD) skin affecting warfare agent
- 13 g1m² S-Lost, concentrated, i.e. with Parlon (THD)
- 10 g/m² VX nerve affecting warfare agent

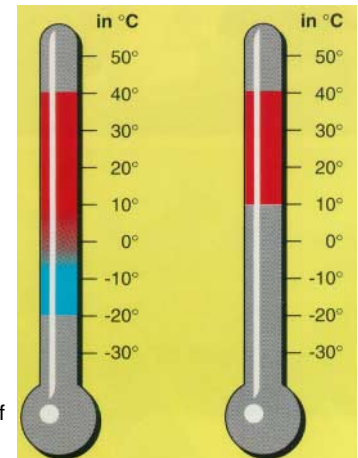
Emulsion detoxification time: 30 min.
Optimum safety due to values guaranteed to be lower than the following limits:

	skin affecting warfare agent	nerve affecting warfare agent
warfare agent	0,05 g/m ²	0,02 g/m ²
resistant paints		
non resistant normal paints	05 g/m ²	0,2 g/m ²

The Patented Emulsion TDE 202

- tetrachloroethylene free
- can be used under the climatic requirements of all NATO countries
- favorable pH-value of 8.0
- reliable emulsion formation
- strongly improved decontamination effectiveness in comparison to conventional decontamination emulsions
- considerably easier storage of emulsion components
- improved environmental compatibility in comparison with other decontamination emulsions
- double stability of decontamination emulsion in comparison with conventional decontamination emulsions, i.e. to a minimum time of 48 hours

- universally usable in winter as well



operational range TDE 202

operational range of a normal calcium-hypochlorite emulsion

Clothing and Equipment Decontamination

Radioactive Decontamination

An effective decontamination of equipment is possible with the liquid solution of RM 54.

Disinfection

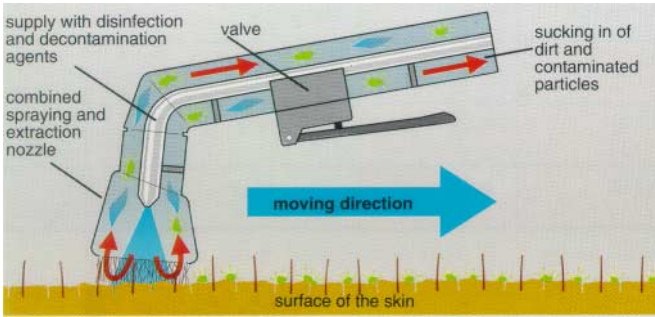
The clothing is steamed out at a temperature of 140-210°C. The disease causing agents are destroyed through the application of RM 35.



Detoxification

Besides the reliable hot gas/hot steam treatment from Kärcher, an effective detoxification of clothing is possible with the RM 31 solution as well as a decontamination of equipment with the new Decontamination Emulsion TDE 202.

Decontamination of Persons



The decontamination of the wounded is performed with the Kärcher mediclean and a decontamination solution for the elimination of contaminants on the skin. The Kärcher pulsating shower

treatment makes possible an effective and time saving decontamination of persons:
 1st Step: Application of RM 21 -solution (1%)
 2nd Step: Rinsing with water.

Due to this treatment process the showering time is reduced to 30 to 60 seconds per person.

Effective + quick

Interior Decontamination



Detoxification and disinfection of buildings, shelters, etc. is carried out with help from dry steam of 210°C.

A non aggressive decontamination agent, i.e. RM 21 or RM 35, can be added.

Decontamination of Terrain

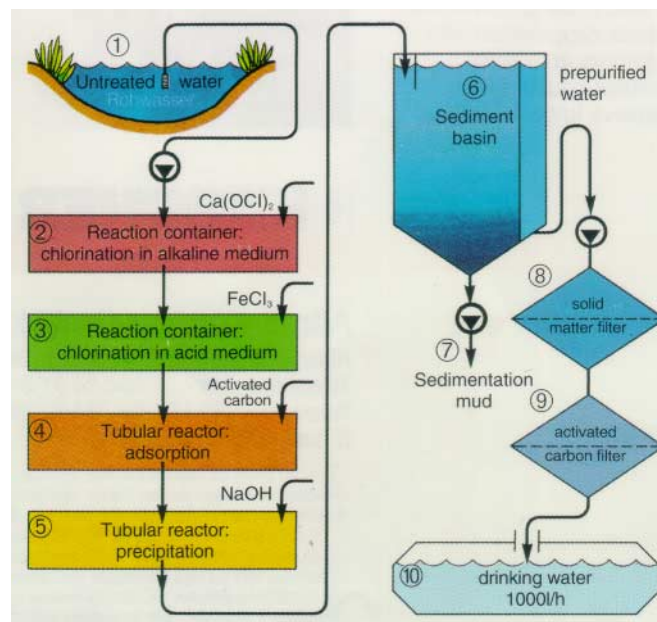


A 10% liquid Di 60 solution is sufficient for the decontamination of terrain.

RM 54 can be added to this C8 solution to lengthen its time of action.

Water Decontamination

The processing of NBC contaminated water is performed in the Kärcher water treatment system WATERCLEAN 1000 by using the components of the treatment set. Chemical warfare agents react with activated chlorine in an alkaline and acid medium. Disease causing agents (bacteria) are eliminated by the activated chlorine. Virus are rendered inactive by means of adsorption to activated carbon and through flocculation.



In case of industrial pollution, the harmful substances deposit on either the iron hydroxide flakes or the activated carbon. Those radionuclides from a radioactive contamination which are not already eliminated through adsorption and precipitation, are eliminated by a secondary reverse osmosis.

German Registered Utility Model

Decontamination of






	Material	Clothing	Equipment	Persons	Interior	Terrain	Water
Radioactive Decontamination	RM 54		RM 54	RM 21			Set WATERCLEAN
Disinfection	TDE 202 PC + RM 54 or RM 35	RM 35	RM 35	RM 21	RM 35	Di 60 + RM 54 or RM 35	Set WATERCLEAN
Detoxification	TDE 202 or RM 31	RM 21	TDE 202 or RM 31	RM 21	RM 21	Di 60 + RM 54	Set WATERCLEAN

Decontamination of

	Part No.	NATO Supply No.	Pack size
RM 21	6.291-211	6850-12-173-3864	30 kg
RM 35	6.291-352	6840-12-137-7440	20 kg
RM 54	6.291-541	6850-12-187-2341	20 l
RM 31	6.291-314	6850-12-173-0724	30 l
Di 60	6.291-381	6810-22-123-9190	20 or 50 kg
TDE 202 LC **)	6.291-497	} Recommended by Kärcher	1,4 l
TDE 202 LC	6.291-498		20 l
TDE 202 PC **)	6.291-499		1,2 kg
TDE 202 PC	6.291-500		50 kg
TDE 202 A PC *) **)	6.291-502		1 kg
TDE 202 A PC *)	6.291-503		50 kg
Set WATERCLEAN	6.291-504		

contains calcium hypochlorite *pack size for DS 10

pH-Value

Symbol	pH-Wert
	7
	7
	9
	11
	8 as emulsion



Innovation

Development and improvement of decontamination agents has a high priority at Kärcher. This is why Kärcher continually research in its own laboratories and government research centers to produce decontamination agents which are still user friendly and ecologically harmless.

Experience

Kärcher Co. has been the market leader in the field of cleaning and decontamination systems for decades. The product range "Special Customers" have developed and introduced products in the field of decontamination. In close cooperation with customers in over 50 countries coupled the extensive know-how of its



specialists, Kärcher produces technologies and materials for radioactive decontamination, disinfection, and detoxification in the military and civil fields.

Kärcher futuretech



Please contact us for further information:



Protection Systems



Cleaning and Environmental Protection Systems



Mobile Catering Systems



Water Purification

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