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Corrosion protection System cleaner Solvents

	GROTANOL FF 1 N	RENOCLEAN SMC/SMC+	RENOCLEAN FXM 4005	ACTICIDE OX/MBS/WB 200	Product	RENOCLEAN MTS 7001	RENOCLEAN MVS 8015	RENOCLEAN MVS 8016	RENOCLEAN MVS 9014	RENOCLEAN KLV	RENOCLEAN UWF/FUCHS MULTICLEAN	RENOCLEAN KU	Product	RENOCLEAN VR 3222	SKR 3001	RENOCLEAN VR 2729 K	SKR 42	ANTICORIT MKR 30	ANTICORIT WMC 9000	,	ANTICORIT RPC 5000					
	System cleaner with almost pan-European approval	System cleaners	System cleaner biocide and fungicide free	Biocide and fungicide for System cleaners	Function	Cleaner based on modified alcohols	Cleaner based on isoparaffin, aromatics free	Cleaner based on isoparaffin, aromatics free	VOC and aromatics free cleaner with corrosion protection	VOC-free, free of aromatics	Free of aromatics, environmentally friendly, demulsifying	Cleaner based on isoparaffin, aromatics free	Function	Temporary	protection pressure- ctest and manti-corro- csive concen- a		Emulsion- cleaner, mineral oil- containing anti-corros- ion emulsion	Water- miscible corrosion protection concentrate	Solvent- based, water- displacing corrosion protection	Anticorrosion concentrates, dilutable in many, preferab- ly RENOCLEAN solvents						
Physical state	liquid	liquid	liquid	liquid	Physical state	liquid	liquid	liquid	liquid	liquid	liquid	liquid	Physical state	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid					
Emulsifying properties	emulsifying	emulsifying	emulsifying	-	Flash Point	≥ 61°C	≥ 56 °C	≥ 62 °C	91 ± 5°C	≥ 90 °C	≥ 61 °C	≥ 61 °C	Emulsifying properties	-	-	-	-	emulsifying	emulsifying	demulsifying	-					
Foaming tendency	none	none	none	_	Boiling range	165-175°C	179-197°C	184-206°C	217-255°C	217-255°C	180-330°C	180-220°C	Foaming tendency	low	low	low	low	moderate to strong	very strong	low	low					
Application	System cleaner for coolant-	System cleaner for coolant-	System cleaner for coolant	In combination with	Density at 15°C	$880 \pm 10 \text{ kg/m}^3$ $760 \pm 5 \text{ kg/m}^3$		$763 \pm 10 \text{kg/m}^3$	820 ± 20 kg/m ³	810 ± 15 kg/m ³	795 ± 10 kg/m ³	762 ± 10 kg/m ³	Application	Immersion	, injection, floo application	od and spray	Dipping and filling		Preferably imm application, sp							
	supply systems, registered in	supply systems, SMC+ does not	supply systems. Base system	RENOCLEAN FXM 4005	Application	Suitable for the		Narrow boiling	Universal application, good corrosion protection	Universal application, slowly evaporating	Universal	For precision					application	low press.	very low press.	low press.	-					
	most European countries!	contain formaldehyde	without biocide/	for targeted application	11	removal of polar and non-polar impurities		range, fast drying			application in industry and commerce,	mechanics and electronic parts cleaning	Materials	all materials	Fe, Mg, Al, Zn (Cu, brass) ¹	Fe	Fe	Fe, Al, Cu, brass	-	all materials	1					
		releasers	fungicide			impunites			through a very thin film of oil	evaporating	applicable with high-pressure- equipment	cicuming	Comments	Nitrite free, contains boron-amine, suitable for	vapor phase	e, works in the stable against drag in of salt and		Boron and mono- ethanol-	Free of barium, silicone and	thin barium-free	Barium-free con- centrates, dilut- able in many, preferably RENO-					
Comments	-	-	-	-	-	-	-	-	-										vibratory finishing	vibratory fin	ishing	alkali	amine free	biocides	corrosion protec- tion film	' '
													Notes			water-m	niscible			oily/waxy	oily					
	Contact time	Contact time	Contact time	-	Materials				all materials ¹ , plastics ¹				Corrosion protec-	temporarily.	temporarily.	porarily. temporarily. te		well	Concentra-	very well	very well					
	6-24h	8-24h	8-24h		Comments	distillable	distillable, recyclable	distillable, recyclable	VOC compliant	VOC compliant, distillable.	Free from caustic and corrosive	Material-friendly cleaning, not	tion, chips / filter test 0/0 at x% at _	'3.5 % / 10° dH	'2 % / 20° dH	'2 % (DI-water)		'3 % / 20° dH	tion-depen- dently		, V					
pH (2%). if applicable	9 at 1 %	9.8 ± 0.3 / 10.4 ± 0.3	10.0 ± 0.5	_			recyclabic	recyclasic		VW approval A29 2819	substances	skin-irritating	pH (20%), if applicable	8 ± 0.4 (3.5 %)	9.8 ± 0.3	10.8 ± 0.5 at 3 %	10 ± 0.5 (10 %)	8.8 ± 0.4	8.7 (10 %)	_	-					
Concentration range in %	1-3	1–2	1-2	-	Notes	Especially for clos	lly for closed cleaning systems designed!		Good anti-corro- sive properties,	Simple applica-	Good anti- corrosion	Easy to use, for solvent systems	Concentration range in %	0.5-3	0.5-5	0.5-3	1-5	3-5	5-25	100	typical >3					
3 /-									for solvent systems without distillation	example, to remove car wax preservation	properties	without permanent distillation	Temperature range	60°C (20-		0)	20°C (10-50)	50°C (20-60)	20°C (20-60)	room te	emperature					
													Injection pressure in bar to about	0.1-~100	0.1-5	0.1-~300	10	2	max. approx. 1	1	_					

Fe - steel, iron, cast iron and stainless steel, 1 to check first

Skin protection before work Skin cleaning Skin care

	Skiii protection before work		Skiir cleaning		Skiii Care				
Product	RENOCLEAN HAND PROTECT MULTI	RENOCLEAN HAND PROTECT PRO	RENOCLEAN HAND WASH MILD	RENOCLEAN HAND WASH INTENSIVE	RENOCLEAN HAND CARE				
Function	Silicone-free, non-marking, breathable, all-purpose skin cream	Silicone-free, water-soluble skin protection cream	Mild, soap-free, unperfumed skin cleansing gel	Hand cleaner with abrasives for heavy soiling	Silicone-free skin care cream	o °			
Application	Before handling with changing working materials (water-soluble and water-insoluble pollutants and irritants)	Prior to contact with strong water-immiscible contaminants such as oils, greases, lubricants, metal debris, dust and soot	For cleaning heavily stressed and sensitive skin	Ideal for cleaning heavily soiled hands in the areas of auto repair shops, and many mechanical engineering	After working perfectly suited as cream for hands, whose natural protective barrier is attacked while working	30			
Comments	Forms a thin, invisible and protective film on the skin	Forms a tack-free, thin and protective microfilm on the skin	Particularly suitable where frequent hand washing is necessary	Includes plastic flour as friction body, low perfumed	Contains nursing vegetable oils, beeswax and moisture-regulating substances				
Notes	Active support for cleaning after work	Includes by the skin well tolerated specialty surfactants, who actively support the subsequent skin cleansing	Free of perfumes, dyes and preserving agents	pH-neutral set and contains skin care substances	Obtains the skin when used regularly, healthy and strong	0			
Available quantities	50 x 100 ml tube 6 x 1,000 ml pouch bottle	50x100 ml tube 6x1,000 ml pouch bottle	25x250 ml tube 6x2,000 ml pouch bottle	25x250 ml tube 6x2,000 ml pouch bottle	50x100 ml tube 6x1,000 ml pouch bottle				
Equipment			RENOCLEAN DONA 2000K Dispenser (for po	ouch bottle)					

Perfect Cleaning – Cleaner for Metalworking



	Nautual														Coosial						Puilden common an anta							Comparison company							
	Neutral cleaner								1-Component-Products							eaners	Special products						Builder components								Surfactant components				
					RENOCLEAN MSO 3004	RENOCLEAN MSA 3011	RENOCLEAN VR 1021	RENOCLEAN C 20 K 1427	RENOCLEAN MTA 3003	RENOCLEAN VR 1798/2	RENOCLEAN WSA 4002	RENOCLEAN FDC 4001	RENOCLEAN MDA 4002	RENOCLEAN FSA 4017	RENOCLEAN FSO 2010	RENOCLEAN FTM 1001	RENOCLEAN SPEZIAL 2000	RENOCLEAN GXA 4014	RENOCLEAN GSO 3001	RENOCLEAN GTM 3001	RENOCLEAN AKTIV DA	Entschäumer GXM 3001	RENOCLEAN MTA 2001	RENOCLEAN MTA 4001	RENOCLEAN FTA 4002	RENOCLEAN ENTFETTER 39		VR 3222	VR 2729 K	RENOCLEAN MST 2001	RENOCLEAN TENSID 161	RENOCLEAN VR 1500	RENOCLEAN MDT 3002		
	Neutral cleaner, salt-free	ner and corr protection	Neutral cleaner, salt- free, spray and immer- sible	spray and	Neutral cleaner, salt-free	Neutral cleaner	Neutral cleaner, salt-free	Neutral cleaner, salt-free		Immersion and ultrasonic cleaner	Spray cleaner, suited for immersion and ultrasonic cleaning	Immersion and ultrasonic cleaner	Immersion and ultrasonic cleaner, sprayable	Spray cleaner, suited for immersion and ultrasonic cleaning	Neutral derusting cleaner	Derusting, descaling, contains phosphoric acid	Emulsifying universal cleaner	Universal cleaner for floors, halls and vehicle fleet	Cleaner for transport boxes (KLT)	Drying accelerator	Demulsifier	Defoamer	Builder, neutral	Builder, moderate- alkaline	Builder, highly alkaline	y Builder, highly alkaline with silicate	, , ,	Builder with corrosion protection, recyclable, salt-free	Builder with corrosion protection, recyclable, salt-free	Cleaning booster, spray and submersible	Cleaning booster, submersible	Cleaning booster, sprayable, neutral cleaner	Cleaning boo- ster, emulsifying, submersible		
Physical state	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid		
	strong demul- sifying effect	, ,	demulsifying effect	demulsifying effect	demulsifying effect	demulsifying effect	demulsifying effect	demulsifying effect	demulsifying effect	slightly emulsifying	demulsifying effect	slightly emulsifying	demulsifying effect	demulsifying effect	slightly demulsifying	-	emulsifying	emulsifying	demulsifying	-	demulsifying	-	-	-	_	-	_	-	-	demulsifying	demulsifying	demulsifying	emulsifying		
Foaming tendency	lowest	lowest	low	lowest	lowest	lowest	low	low	moderate	strong	low	strong	moderate	low	low	moderate	strong	moderate	low	low	low	none	none	none	none	none	none	none	none	low	moderate to strong	very low	very strong		
	Spray and high pressure cleaning, deburring (~600 bar)	cleaning	Spray, immersion and ultrasonic cleaning	Spray, pressure flooding and high pressure cleaning (200 bar, 300 bar short-term)	Spray and high pressure cleaning (500 bar)	Spray, pressure flooding and high pressure cleaning	Spray cleaning	Spray cleaning	Spray, immersion and ultrasonic cleaning	Immersion, ultrasonic and manual cleaning	Spray, immersion, ultrasonic and manual cleaning	Immersion, ultrasonic and manual cleaning	Immersion cleaner, sprayable up to ~8 bar (system- dependent)	Spray, immersion and ultrasonic cleaning	Spray, immersion and ultrasonic cleaning	Immersion, ultrasonic and manual cleaning. Consumption indicator integrated	Immersion, ultrasonic and manual cleaning of commercial vehicle, tarpaulins, indoor and workshop	Floor cleaning machine or manually, plant, vehicle and hall cleaning	Spray and manual cleaning	Spray and immersion application	Separation of emulsified oil	Foam-control additive for cleaning solutions		Immersion, injection, ultrasonic and spray cleaning			Immersion, injection, ultrasonic and spray cleaning, electrolytic degreasing, dephospha- ting	Immersion, injection, ultrasonic and spray cleaning, pressure rate	Immersion, injection, ultrasonic and spray cleaning, pressure rated	Immersion, injection, ultra- sonic and spray cleaning	Immersion, injection, and ultrasonic cleaning	Spray cleaning	Immersion and ultrasonic, conditional pressure flood cleaning		
	-, , ,	Cu, (Al, Mg) ¹	-, , ,	Fe, Al, brass, Cu, Mg	Fe, Al, brass, Cu	Fe, Al, brass, Cu, Mg	Fe, Mg, (Al, Cu, brass) ¹	Fe, (Mg) ¹	Fe, Al, (Zn, Cu, brass) ¹	Fe, (Al, Cu, brass) ¹	Fe, Al, (Mg) ¹	Fe, Mg, Titan, plastics ¹	Fe, Fe gal., Mg, (Al) ¹	Fe, (Mg) ¹	Fe, (Al)	Fe	all materials ¹	all materials ¹	all materials ¹	all materials ¹	-	-	Al, Cu, brass, (Zn) ¹ , plastics	, , , , ,	Fe, Mg, plastics ¹	Fe, Mg, Al, (Cu, brass, Zn) ¹ , plastics ¹	Fe, Mg, (Cu, brass) ¹ , plastics ¹	all materials	Fe, Mg, Zn, plastics	all materials	all materials	all materials	all materials		
	High pressure suitable	very low,	Very low residue formation, salt-free	High pressure suitable, contents hydroxide. VW approval A29 0976	Suitable for microfiltra- tion, salt-free, residue for- mation is very low, high pressure suited	High pressure suitable, contents hydroxide. PSA approval worldwide: MABEC-code Z 000 533 700	Residue formation is very low, salt-free	Very good corrosion protection, low residue formation, salt-free. VW approval A29 2863	Silicate-free, contains hydroxides, phosphates and amines	Contains phosphates, amines and silicates	Contains hydroxides, amines and silicates	Combinable with RENOCLEAN MDT 3002	Silicate-free, contains hydroxides and phosphates	Silicate-free, contains hydroxides, amines and phosphates	Applicable after thermal or ECM deburring	Suitable for cleaning calcified and contaminated cleaning equipment	Contains phosphates. Specifications: FORD 800 51 007	Lemon scent	To remove oils, grease, abrasion and dust from transport	Antistatic effect on plastic surfaces	Demulsifier with defoaming properties	Based on paintable polysiloxanes	Free of borate, silicate and surfactant, contains phosphates, usable with microfiltration	Free of borate, silicate and surfactant, contains phosphates, usable with microfiltration	Free of borate, silicate and surfactant, contains hydroxide and phosphates, usable with microfiltration	Ė	Borate-free, contains hydroxides, usable with microfiltratio	amines, usable with	Free of nitrite, boron, silicate and surfactant, contains amines, usable with microfiltration. Works in the vapor phase as corro- sion protection	Microfilterable, highly dependent on membrane and operating parameters!	Microfilterable, highly dependent on membrane and operating parameters!	Use also as a neutral cleaner, free of corrosior protection components	Good ultrasonic support, high oil and fat absorption		
	almost foam- free ≥ 25 ° C	applicable, low-foaming application from 20 °C, depending on pressure	e. g: before heat-treatment, low-foam use		For example: used before heat-treat- ment, virtually foam free from 10 °C	Low foaming ≥ 30°C, pressure dependent!	For example: used before heat treat- ment	For example: used before heat treat- ment	Universally applicable, e.g. for engine preparation		For heavily soiled items and aggre- gates (e.g. train, engine and chassis components)	For cleaning tasks in medi- cal technolo- gy, supports spot-free drying	For cleaning parts, e. g. with difficult to remove forming lubricants	For cleaning parts, e. g. with difficult to remove pigment dirt	be fitted immediately with corrosion protection (RENOCLEAN- or ANTICORIT products)		all manual and manual container rinse, e. g.			Installations for the removal of demulsified oil are necessary (oil separator etc.)	Immediate, long-lasting defoaming and deaeration effect	Note product info – use with appropriate surfactant			ctant		,	ccordance with regulation (EC) no. 648/2004							
filter test 0/0 at v% at		temporarily. '2 % / 10° dH			'2 % / in	temporarily. '2.5 % / 10° dH	temporarily. '2 % / 10° dH	'1.5%/	, ,	(temporarily) '9 % / 10° dH	1 2	-	temporarily. '2.5 % / 20° dH	temporarily, '2 %/20° dH	-	-	-	-	-	-	-	-	-	-	-	-	-	temporarily. '3.5 % / 10° dH	temporarily. '2 %/10° dH	-	-	-	-		
pH (2 %), if applicable	9.2 at 3.5 %	9.4 ± 0.4	9.6 ± 0.3	9.8 ± 0.3			10.2 ± 0.3	10.2 ± 0.3	9.7 ± 0.3 (3 %)	10.8 ± 0.5	12.1 ± 0.4 at 2.5 %	12.1 ± 0.4	12.2 ± 0.3	12.3 ± 0.5	5.9 ± 0.5 (5 %)	1.5 ± 0.5 (DI-water)	10.9 ± 0.4 (3 %)	11.7 ± 0.5 (1 %)	8.5 ± 0.5 (100 %)	8.7 ± 1	9.3 ± 0.5 (100 %)	7.4 ± 1 (100 %)	7.8 ± 0.8	10 ± 0.5	12.5 ± 0.5	12.6 ± 0.6	12.9 ± 0.6 (1 %)	8 ± 0.4 (3.5 %)	10.8 ± 0.5 (3 %)	6 ± 1	8.6 ± 0.5	8.5 ± 0.5	9.8 ± 0.8 (3 %)		
Concentration range in %	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	2-7	2-7		2-7	1-7	1-7	2-30	5-50	2-20	1-20	1-10	0.2-1.0	0.05-10	0.01-0.25	2-7	2-7	2-8	1-20	2-18	2-5	2-5	0.3-3	0.1-1	0.3-4	0.3-2		
	50°C (10−80)			65°C (30-80)	60°C (10-80)	60°C (20 -80)	65°C (30-80)	65°C (40-80)	65°C (40-80)	65°C (20-80)	60°C (30-70)	65°C (50-80)	65°C (40-80)	65°C (35–85)	50°C (20-75)	30°C (20−60)	35°C (20 −80)	20°C (20 -80)	60 °C (<u>20</u> −80)	50°C (20-80)	10-90°C	10−90°C	65°C (20-80)	65°C (20-80)	65°C (20-80)	65°C (20-80)	65°C (20-80)	60°C (20−80)	60°C (20-80)	65°C (40–80), spray min. 50°C		65°C (30-80)	65°C (20-80)		
Injection pressure in bar to about		500 (≥ 50°C)		200 (300 short-term)	500 (≥ 50°C)	500 (≥ 50°C)	~ 20	~ 15	~ 15	-	15	-	8	25	20	5	_	-	5	5	-	-	-		Applicable inje	ection pressure a	ccordingly used s	surfactant compo	nent	5 (7.5 at > 65 °C)	2 (> 60°C)	25	-		
-	Fe – steel, iron,	cast iron and stair	nless steel, 1 to ch	heck first																															