

## FORMULATIONS FOR CLEANERS AND DETERGENTS

### **Strong foam cleaner/degreaser for I+I applications**

POLYGON PCG 1444	6.0%
TENSAN PCG 1439	4.0%
monoethanolamine	9.9%
1,2-propylene glycol	5.0%
KOH (45%)	5.0%
water	70.1%

### **Active foam acidic with corrosion inhibition**

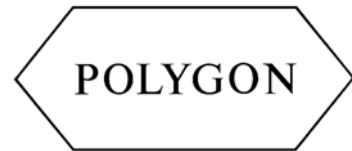
olefin sulfonate (Sodium salt, 40%)	5.0%
POLYGON PC 1725	6.0%
TENSAN TEM	10.0%
phosphoric acid (85%)	5.0%
perfum lemon	0.2%
balance demin water, colorant	

applied concentration: 2 - 5%

### **Alkaline degreaser, disinfecting (active foam, without active chlorine)**

TENSAN VS	10.0%
POLYGON PCG 1946	5.0%
OPTIGONAL DX-O / PC 1621	4.0%
POLYGON PC 1721	2.0%
Protectol KLC 50 (benzalconium chloride 50%)	10.0%
KOH (45 %)	15.0%
balance water	

applied concentration: 2-5%



**Alkaline cleaner for pressure washer**

TENSAN P894P	7.5%
OPTIGONAL DX-O	2.0%
POLYGON PC 1721	3.0%
sodium or potassium cumene sulfonate (40%)	10.0%
KOMPLEXBILDNER PCG 1400	15.0%
sodium metasilicate x 5 H <sub>2</sub> O	3.0%
balance water	

applied concentration: 1-3% in pressure washer

**Cleaner for baking ovens and baking trays, liquid, low-foam**

TENSAN KS	10.0%
OPTIGONAL DX-O	3.0%
POLYGON PCG 1419	3.0%
borax (Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> )	5.0%
potassium water glass (40%)	30.0%
NaOH (50%)	30.0%
balance water	

applied concentration: 2 - 5 %

**Ovencleaner type K2r**

TENSAN VS	5.0%
1,2 Propylene glycol	5.0%
N-methylpyrrolidone	3.5%
monoethanolamine	10.0%
balance water	

applied concentration: undiluted, spray on cold surfaces, wipe off

For application by brush add 0,5 - 1% of POLYGON PC 1637 (thickening agent).



**Biff bath cleaner liquid**

POLYGON PC 1664	5.0%
formic acid (85%)	3.0%
lactic acid (80%)	3.0%
NaOH (50%; for pH 4)	ca. 3.6%
perfume lemon	0.1%
colorant q.s.	
balance water	

**Chlorinated cleaner, foam-stable**

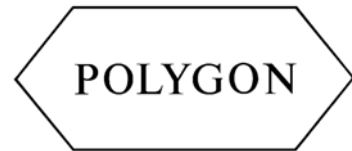
secondary alkane sulfonate (65 %, Sodium salt )	1.5%
fatty alcohol ether sulfate (28 %, Sodium salt)	1.5%
Aromox MCD-W (Akzo)	10.0%
potassium or sodium cumene sulfonate (40 %)	10.0%
potassium metasilicate (38 %ig)/ potassium water glass (40%)	10.0%
NaOH (50%)	15.0%
POLYGON PC 1192	5.0%
balance sodium hypochlorite solution and water	

applied concentration: 1-3 % up to 70 °C max.; 2-30 min.

**Cleaner for shower cabins , water-repellent (for easy-to-clean surfaces)**

POLYGON PCG 1443	0.5%
C10-C12 fatty alcohol with ~6EO	1.0%
Quaternium-80 (silicone quat)	0.2%
citric acid x H <sub>2</sub> O	1.5%
Na <sub>3</sub> -citrate x 2H <sub>2</sub> O	1.5%
ethanol	4.0%
n-cetylpyridinium chloride	0.1%
perfum lemon	0.3%
TENSAN VS	5.0%
balance water	

application: undiluted, leave on, rinse with water



**Decolorant for mould, blood, red wine, fruits, tea and coffee stains**

alkane sulfonate (sodium salt, 60%, e.g. Marlon PS 65)	3.0%
Aromox DBM-W (dimethyl cocoamineoxide)	5.0%
Perhydrol (30% hydrogen peroxid solution)	15.0%
OPTIGONAL DX-O	3.0%
borax (Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> )	0.3%
Sodium tripolyphosphate	2.0%
balance water	

applied concentration: as is or diluted with water up to 1:2

**Cleaners for radiators**

POLYGON PCG 1821	5.0%
POLYGON PC 1390	2.0%
sodium metasilicate x 5 H <sub>2</sub> O	3.0%
POLYGON PCG 1831	2.0%
triethanolamine (TEA)	5.0%
balance water	

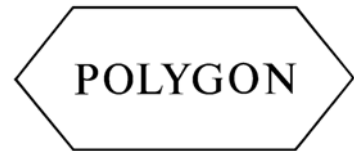
applied concentration: 1:10 dilution with water, leave on, rinse well

**Oven cleaner/fat solvent for commercial kitchens**

POLYGON PCG 1946	7.5%
OPTIGONAL DX-O	2.0%
KOH (45%)	15.0%
potassium metasilicate (38%)	10.0%
balance water	

**Oven cleaner/fat solvent for commercial kitchens**

TENSAN VS	10.0%
Marlipal O13/90 (isotridecanol 9EO)	3.0%
butyldiglycole	2.0%
OPTIGONAL DX-O	2.0%
NaOH (50%)	5.0%
TEA	10.0%
potassium metasilicate (38%)	10.0%
balance water	



**Dishwasher for private households, liquid, without chlorine, non-corrosive**

POLYGON PCG 1406	8.0%
POLYGON PC 1199	1.0%
NTA-Na <sub>3</sub> salt (92%, pdr.)	10.0%
potassium metasilicate x 5 H <sub>2</sub> O (40% solution)	1.0%
NaOH (45% solution)	1.0%
balance water	

applied concentration: ca. 2 - 4 g/l

**BBQ cleaner with less than 5 % caustic**

POLYGON PCG 1946	4.0%
OPTIGONAL DX-O	3.0%
TENSAN KSK	5.0%
sodium metasilicate x 5 H <sub>2</sub> O	15.0%
KOH (45%)	5.0%
N-methylpyrrolidone	5.0%
balance water	

**Tyre care (tyre shine)**

POLYGON PCG 1859	10.0%
glycerol (100%)	10.0%
special petrol 60/95 (z.B. Shellsol 60/95)	30.0%
IPA (isopropanol)	50.0%

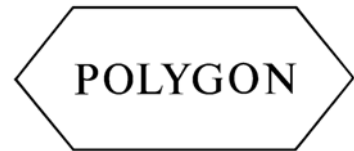
**Sanitary cleaner and lime scale remover, non-hazardous**

POLYGON PC 1199	5.0%
TENSAN KSL	1.0%
lactic acid (80%, e.g. Purac 80)	15.0%
NaOH (50%)	ca. 3.3%
POLYGON PCG 1923	1.0%
balance water	

viscosity: low

pH (of the concentrate): 4

applied concentration: undiluted or diluted with water up to 1:20



### **Rinsing aid for conveyor dishwashers**

POLYGON PC 1199	5.0%
cumene sulfonate KNA	10.0%
lactic acid (80%)	15.0%
POLYGON PC 1387	5.0%
perfume lemon	0.2%
balance water	

applied concentration: 3 to 8 ml/10 l water

foam:

20°C: little: 10 ml

50°C: even less: 5 ml

wetting of glass and metal: very good

POLYGON PC 1387 removes tea stains particularly well

### **Power cleaner, lime scale remover and acidic sanitary cleaner**

C10-fatty alcohol with ~8EO (Lutensol XL 80, BASF)	0.3%
phosphoric acid (75%)	2.0%
citric acid x H <sub>2</sub> O	4.0%
amidosulfuric acid	8.0%
POLYGON PCG 1418	0.2%
POLYGON PCG 1206	1.0%
perfume	0.2%
colorant (blue)	0.001%
balance water	

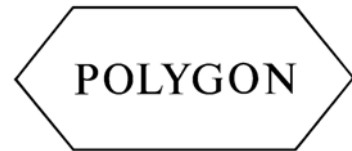
pH (of the concentrate): < 1

applied concentration: undiluted or diluted with water up to 1:20.

### **Cleaner for cold storage rooms (food)**

POLYGON PCG 1946	3.0%
Bardac 22 (Lonza AG)	1.0%
POLYGON PC 1395	3.0%
1,2 propylene glycol	30.0%
isopropyl alcohol (IPA)	30.0%
balance water	

applied concentration: undiluted or diluted with water up to 1:2

**Plastic cleaner**

POLYGON PCG 1664	5.0%
dipropylene glycol monomethyl ether (Dowanol DPM)	10.0%
TPPP (tetrapotassium pyrophosphate)	5.0%
monoethanolamine (MEA)	2.0%
POLYGON PC 1281	2.0%
balance water	

Applied concentration: diluted with water 1:10 to 1:30

**Antistatic plastic cleaner for computer cases, screens, and keyboards**

POLYGON PCG 1401	5.0%
silicone emulsion (20%; e.g. Tego Polish Additiv E 3892, Goldschmidt)	15.0%
demin water	80.0%

Applied concentration: to be sprayed undiluted on surfaces, then polish.

**Cleaner for food containers and crates, disinfecting, low-foam, chlorine-free**

1) TENSAN KSK	5.0%
2) OPTIGONAL DX-O	3.0%
3) Marlox S 58 (C13-C15 alcohol-8PO5EO)	2.0%
4) Protectol KLC 50 (benzalconium chloride 50%)	2.0%
5) KOH (50 %)	15.0%
6) potassium water glass (40%)	10.0%

Application:

Mix 1), 2), 3), and 4) first, then add water, finally KOH and silicate.

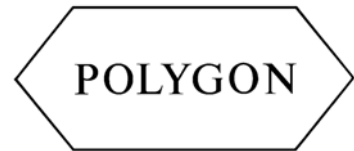
**Cleaner for light alloy rims and for aluminium façades**

TENSAN P894P	4.0%
AG 6202 (Akzo, 2-ethylhexyl-APG, 65%ig)	2.0%
TENSAN KS	3.0%
tetrapotassium pyrophosphate (TPPP)	15.0%
Kelzan ASX-T (xanthan gum)	0.5%
colorant, green	0.0003%
balance water	

pH (concentrate): about 9

viscosity (mPa x s): about 135

foaming properties (2%): max., stabile



**Cleaner for dairies, acidic, fat emulsifying**

POLYGON PCG 1946	4.0%
Plurafac LF120 (fatty alcohol EO,PO-adduct, BASF AG)	4.0%
Dowanol PnB (3-butoxy-2-propanol, Dow Chemical)	5.0%
phosphoric acid (75%; H <sub>3</sub> PO <sub>4</sub> )	50.0%
glycolic acid (70%, Clariant / DuPont)	5.0%
balance water	

Applied concentration: 0,5-3,0%

**Ecological drain cleaner**

TENSAN KSL	2.0%
OPTIGONAL D-N	0.3%
POLYGON PC 1637	0.2 bis
KOH (45%)	0.3%
balance demin water, colorant, perfume	30.0%

Application: dissolve TENSAN KSL and OPTIGONAL D-N in water with stirring. Add eventually colorant and perfume. Add KOH in several steps with stirring. Finally add thickener.

applied concentration: undiluted

**Carbon grease remover with 45 % caustic solution**

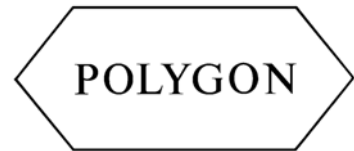
1) NaOH (50%ig)	90.0%
2) POLYGON PCG 1439	5.0%
3) Wasser	5.0%

mix 2 and 3 first, then add slowly NaOH until you get a clear and stable solution

**Demulsifying cleaner, pressure application**

TENSAN P894P	4.0%
TENSAN KS	4.0%
OPTIGONAL DX-O	2.0%
Dowanol PnB	5.0%
triethanolamine	10.0%
NAOH (50%)	0.6%
sodium metasilicate 5 x H <sub>2</sub> O	5.0%
balance water	

applied concentration: 0.5 to 3%



**Cleaner for BBQ stations and combi-steamers**

POLYGON PCG 1946	4.0%
POLYGON PC 1395	2.0%
sodium metasilicate 5 x H <sub>2</sub> O	9.5%
N-methylpyrrolidone	5.0%
balance water	79.5%

applied concentration: 2 - 10%

**Cleaner/mould remover with sodium hypochlorite**

secondary alkane sulfonate (Sodium salt, 30%)	5.0%
C12-C14-Lauryl dimethyl aminoxide (31%)	3.0%
NaOH (50%)	2.0%
POLYGON PC 1393	2.0%
Sodium hypochlorite (15% solution)	25.0%
Balance demin water, colorant, perfume	

Applied concentration: diluted with water 1:10 to 1:20

also against algae, moss; bleaches black mould.

**Cleaners for native fats in scalding tanks**

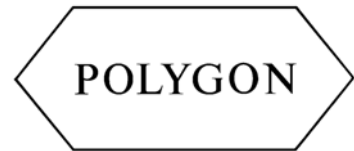
H <sub>3</sub> PO <sub>4</sub> (75%)	50.0%
HNO <sub>3</sub> (65%)	10.0%
POLYGON PCG 1946	5.0%
balance water	

**Cleaners for heat exchangers**

POLYGON PC 1199	2.5%
Dowanol PnB	5.0%
butyldiglycole	5.0%
water	35.5%
POLYGON PCG 1923	2.0%
Lutropur MSA (methanesulfonic acid, BASF )	50.0%

Applied concentration : 3 - 10%

temperature: 20 – 60°C



**Basic sanitary cleaner with protection against corrosion**

POLYGON PCG 1664	5.0%
phosphoric acid (75%)	20.0%
citric acid x H <sub>2</sub> O	3.0%
POLYGON PCG 1661	1.0%
perfume	0.2%
colorant blue	0.001%
balance water	

Applied concentration: diluted with water 1:10 to 1:30

**Acidic metal degreaser with rust protection (foaming)**

POLYGON PCG 1946	5.0%
TENSAN TEM	5.0%
POLYGON PCG 1661	3.0%
butyldiglycole	5.0%
phosphoric acid (85%)	20.0%
balance water	

Applied concentration: 5-10%

**Acidic metal degreaser with rust protection (foam reduced)**

POLYGON PCG 1821	5.0%
TENSAN TEM	5.0%
POLYGON PCG 1661	3.0%
Butyldiglycole	5.0%
phosphoric acid (85%)	20.0%
balance water	

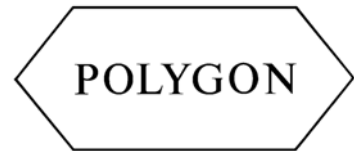
Applied concentration: 5-10%

**Low-foam cleaner for rims**

POLYGON PC 1199	7.5%
TENSAN KS	5.0%
TENSAN TEM	5.0%
POLYGON PCG 1201	2.5%
H <sub>3</sub> PO <sub>4</sub> (75%)	20.0%
balance water	

clear melting point < 0 ° C  
upper cloud point 35 ° C

Applied concentration 2 - 5 %



**Garage and shop floor cleaner**

POLYGON PCG 1946	7.5%
POLYGON PC 1390	2.0%
TPPP (tetrapotassium pyrophosphate)	5.0%
triethanolamine	15.0%
Sodium metasilicate x 5 H <sub>2</sub> O	3.0%
KOH (45%)	2.0%
balance water, colorant, perfume	

Application: diluted with water 1:2 to 1:20, rinse with water after 15 minutes