

ALIEN PROPERTY CUSTODIAN

WASHING AND CLEANSING AGENT WHICH REMAINS HOMOGENEOUS AND A PROCESS FOR THE PREPARATION OF SUCH AGENT

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The application relates to a washing- and cleansing agent which remains homogeneous, and to a process for the preparation of such agent.

Already numerous washing- and cleansing agents are known. It is for instance known that alkali silicates show in a diluted condition properties analogous to soap solutions as regards dissociation and adsorption. Silicates have also cleansing properties in concentrated condition. However, silicates show unfavourable properties which appear particularly when cleansing fabrics and also when silicates are mixed with other electrolytes. Sharp particles will settle in the fabrics, causing these to be damaged. Sulphonic acid alkalis have apart from other favourable properties a great moistening capacity, owing to which also these substances, either or not mixed with soap and together with the usual additions to soap, are applied as cleansing agents. As such additions for example sodium phosphate, sodium carbonate, borax, alkali silicates, etc. are used.

I have found that by mixing water soluble silicates and sulphonic acids or alkali sulphonates in a proportion of at least 2 parts by weight of silicate, based upon concentrated water glass of 37-40° Bé to one part by weight of sulphonic acid, a washing and cleansing agent is obtained which remains homogeneous and entirely replaces soap, which is, however, cheaper and even surpasses soap for certain washing purposes, so that in those cases it is to be preferred before the latter.

By mixing a water soluble silicate and a sulphonic acid or an alkali sulphonate according to the invention a mixture is obtained both components of which supplement each other with respect to the washing action. If an alkali silicate is mixed in hot condition or at room temperature with soap the latter separates out as top layer; it is as it were salted out with detrimental consequences with regard to the condition of the silicate. If, however, a sulphonic acid salt is used for mixing particularly in a ratio of at least two parts by weight of silicate, based upon concentrated water-glass of 37-40° Bé to one part by weight of sulphonic acid, then a completely homogeneous washing- and cleansing agent is obtained which retains this condition due to its high specific weight as well as to its better power of resistance against salting out.

The term sulphonic acids comprises all sulphonating products of organic compounds with their various derivatives, which increase the moistening, impregnating and emulsifying properties and decrease the surface tension. As an example may be mentioned sulphonic acids of hydroxy-fatty acids (ricinus oil) and fat alcohols of fatty acids and mineral oil (true sulphonic acids in which the sulphur is for the greater part directly bound to the carbon atom); alkyl-aryl sulphonic acids, such as e. g. the re-

agents for the splitting up according to Twitchell, lignine- and humine-sulphonic acids (splitting products of wood, peat, coals). These mixtures which are homogeneous both in cold and hot condition will be liquid, pasty or hard in cold condition dependent on the concentration. Such a mixture also remains homogeneous, if a small proportion of electrolytes are added e. g. alkali carbonates, alkali phosphates and the like. The nature of the acids and of the electrolytes determine the permissible proportions.

The application is limited to a percentage of other electrolytes which does not exceed 110% of the silicate content, based upon dry substance. The silicates are present in the molar proportion: NaO:SiO₂ of 1:1 up to 1:4 inclusive dependent on the purposes for which they are to be used and the composition of the mixture.

The following examples are given for illustrating purposes without the invention being restricted thereto:

	Parts by weight
1. Water glass, 37-40° Bé	100
Caustic soda lye, 38-40° Bé	30

to which a mixture of:

Alkyl-aryl sulphonic acid	4
Water	4
Caustic soda lye, 38° Bé	2

is added.

	Parts by weight
2. Water glass, 37-40° Bé	100
Potassium hydroxide, 50° Bé	55

to which 2 kilograms of sulphonated ricinus oil are added.

	Parts by weight
3. Sulphonated mineral oil	10
Sulphonated ricinus oil	10
Potassium hydroxide, 50° Bé	10
Water	10
Water glass, 37-40° Bé	60
	100

	Parts by weight
4. Sulphonated mineral oil	10
Water	10
Caustic soda lye, 38° Bé	5
Sodium carbonate	19
Water glass, 37-40° Bé	56
	100

	Parts by weight
5. Lignine sulphonic acid	10
Water	20
Caustic soda lye, 38° Bé	5
Water glass, 37-40° Bé	60
Trinatriumphosphate	5
	100

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