

**MINISTRY OF PUBLIC HOUSING, PHYSICAL PLANNING
AND ENVIRONMENTAL MANAGEMENT (VROM).
External Affairs Department
The Hague.**

October 30, 1995

PRESS RELEASE

ENVIRONMENTAL RISK OF LAUNDRY AND CLEANING PRODUCTS TURNS OUT LOW

The environmental risks of the use of laundry detergent and cleaning (L&C) products are acceptable. A steering committee in which the Dutch environmental ministry VROM and the Dutch Soap Association NVZ are represented, concludes this on the basis of risk assessments of the four most applied ingredients in L&C products. These compounds are nearly completely removed (99.1% to 99.8%) by sewage treatment plants. With that the risk of these compounds turns out to be negligible low in practice.

This is stated in a letter of Minister de Boer (VROM) to parliament on the results of the National Action Plan L&C.

In 1991 the National Action Plan L&C was drafted with the objective to come to an acceptable environmental impact of L&C products, taking into account their societal benefit. In first instance, it was assumed that the risks of the different ingredients used in L&C products would need to be evaluated separately. In view of the negligible risk of the four most important compounds, it has, however, now been decided not to evaluate all ingredients, and to round off the National Action Plan L&C.

Risk Low

At the time priority was given to those compounds that were considered potentially most impactful, and had the largest usage volume in L&C products. In this way, LAS (linear alkyl benzene sulphonate), AE (alcohol ethoxylates), AES (Alcohol ether sulphates) and Soap were selected, ingredients that account for 80% of the total volume of surfactants used in L&C products.

Per ingredient the maximum tolerable risk (MTR) for surface waters was defined. On the basis of these values, the true environmental burden for surface waters of these compounds was investigated. In practice, the sewage treatment plants turn out to remove the surfactants nearly completely (from 99.1 to 99.8%). Therefore, the concentrations of the ingredients in surface waters are so low, even a factor 100 below MTR.

On the basis of these positive results it has been decided that the other ingredients of L&C products need not also to undergo an extensive risk assessment. The authorities and industry will jointly monitor the developments. To certain ingredients that are in the public attention, or may come in the future, attention will be given.

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DIRECTIONAL TRANSLATION

**MINISTRY OF PUBLIC HOUSING, PHYSICAL PLANNING
AND ENVIRONMENTAL MANAGEMENT (VROM).
DIRECTORATE-GENERAL ENVIRONMENT
Dep. Industry, Building, Products, Consumers
Products Section**

To the Chairman of the Parliament
The Hague

October 30, 1995

Subject: Detergents

Dear Chairman,

Further to my letter of December 2, 1992 that was mainly on the status of the risk evaluation of fabric softeners, I hereby want to inform you of the status of affairs on the subject of laundry and cleaning products (L&C)

In 1991 a National Plan of Action L&C was drafted by the Dutch Soap Association (NVZ) and the Ministry of VROM. This action plan falls under the product policy of the NMP2 [National Environmental Plan] and links to parts of the Law on Dangerous Substances and Preparations, among others the priority chemicals list. Furthermore, international co-ordination exists via the EU and OSPARCOM (International commission executing the work on the Convention for protection of marine aquatic environment of the north-east Atlantic ocean).

In this Action Plan the objective for the product policy on L&C products was formulated: to come to an acceptable environmental burden of L&C products, taking their societal benefit into account. Also objectives were formulated for the assessment of environmental risks of individual ingredients of L&C products, coupled to a time path. There was consultation at three levels, the Steering Committee L&C in which the general objectives of the program were discussed, the Project Group L&C that was responsible for the management and progress of the plan, and the Expert group Detergents & Environment that guarded the scientific quality of the investigations and would advise the Project Group.

The approach was chosen of a systematic assessment of the risks of individual ingredients. Because there are about 50 substances used in different combinations and amounts in L&C products, priority setting in the sequence of the compounds to be assessed was required. This sequence was determined by means of a straight forward screening method (toxicity of the ingredients versus the used tonnage's), by which the most potentially impactful ingredients would be the first to be considered.

From this screening, the first selected were LAS (linear alkylbenzene sulphonate), AE (Alkyl ethoxylates), AES (alcohol ethoxy sulphates) and Soap. These four ingredients belong to the group of wash-active substances and form within this group the highest usage volume (more than 80%). Following on the assessment of these four ingredients, two additional cycles of risk assessments were planned for the next groups of ingredients.

In the meantime, the risk assessment of LAS, AE, AES and Soap has been executed. The results and conclusions were discussed in the Expert Group Detergents & Environment and the Project Group L&C, and subsequently approved by me.

The risks of the first four ingredients have been assessed as follows.

A very extensive inventory was made by the detergent industry of the available ecotoxicological data of these four ingredients. These data were subsequently evaluated by RIVM [National Institute of Public Health and Environmental Protection], after which in consultation with industry the Maximum Tolerable Risk level (MTR) for surface waters was determined. The MTR values for the four ingredients are listed in Table 1 and turn out to be in the same order of magnitude for LAS, AE and AES. The MTR of Soap appears to be clearly lower. This can be explained by the absence of chronic toxicological data for this substance. However, the tentative results of a

chronic study with Soap indicate that the toxicity of Soap is comparable to that of LAS, AE and AES. This means that the MTR of Soap presumably is higher than listed in the table.

For the research to the actual exposure in the aquatic environment, in a co-operation between NVZ, RIZA [National Institute of Surface Water and Wastewater Management], RIVM and the University of Amsterdam, a monitoring study was performed on the concentrations of the four ingredients in in- and effluents of seven sewage treatment plants. Subsequently, modelling was used to make an estimate of the concentrations of the substances in surface waters. From this monitoring study it becomes clear that the removal of the substances in sewage treatment plants is almost complete (99.1 to 99.8%). As a consequence, the expected concentrations in the surface waters (PEC) close to the plants are low, about a factor 100 below MTR level. Therefore, it can be concluded from this risk assessment that the environmental risks for the use of these substances in L&C products is acceptable by disposal on normal functioning sewage treatment plants. Assuming that this is the case in the Netherlands, I appraise the usage of these substances as acceptable in every respect.

Table 1: Maximum Tolerable risk level (MTR) and negligible risk levels (VR) for surface waters of four detergent ingredients.

Ingredient ^a	MTR (ug/l) ^b	VR (ug/l) ^b
LAS	250	2.5
AE	110	1.1
AES	400	4.0
Soap	27	0.27

^a Values are for C_{xx} LAS, C_{xx} EO_{xx} AE, C_{xx} EO_{xx} AES

^b Values for dissolved fractions in surface waters

In view of the favourable results of this extensive risk assessment the project group has concluded that is not sensible to evaluate the next ingredients of the list in the same manner. On the basis of the screening of the other substances, an even lower PEC/MTR ratio is to be expected. This is because this concerns substances with a comparable or even lower toxicity, of which much lower volumes are used. This assumption has been verified by means of an additional screening and proven correct. The Steering Committee L&C has on this basis proposed to conclude the National Action Plan, and I have also adopted that vision.

With the rounding off of the National Action Plan, the approach of the systematic assessment of the risks of all currently used individual ingredients has been abounded. As in L&C products the ingredients are of a relative large volume of usage, I judge it desirable to monitor the developments. Moreover there are ingredients that are in the public attention, while in the future other ingredients may be applied.

These specific ingredients and other affairs that may come in discussion, will in future under the responsibility of the Contact Group L&C products, consisting of representatives of VROM and NVZ, and by the Expert Group Detergents & Environment, that is the appropriate body for this, be studied.

The NVZ will on a yearly basis report the changes in raw material usage in L&C products to the Contact Group. Via an annual reporting by the Contact group, I will be kept informed of the developments.

I want to make use of the opportunity to inform you on a number of other developments in the area of L & C products that have taken place over the last years and have contributed that the environmental impact of the products at the moment has arrived at a for me acceptable level.

Over the last years, also due to the environmental awareness of producer and consumer, the National Action Plan and the Packaging Covenant, the development to the placing on the market and selling of more compact and efficient products and packaging has been very successful, especially in the field of laundry detergents. This development has led to the situation that, with an increasing usage of L&C products, since 1990 (the first measuring point), the total volume of ingredients used in domestic L&C products has been reduced by more than 20%. There also was a reduction of usage of packaging materials to such a degree that the L&C industry already in 1993 reached the year 2000 target of the Packaging Covenant.

Thus, the conversion of traditional to compact products has been successful. At the moment 85% of the Dutch consumers use compact efficient detergents instead of the traditional -high dosing - laundry powders, which is in Europe a major success. The expectation is, and the efforts are directed to towards this, that this trend will continue.

Next to that I can inform you of the following developments.

The NVZ and their member companies have announced to completely stop the usage of nonylphenol ethoxylates (NPEO's) this year. Already in 1990 these compounds were not used anymore in domestic L&C products. In 1992 in the Ministers Council of OSPAR the Recommendation 92/8 concerning the stepwise ban of usage of NPEO's was accepted without reservation. In this recommendation, among others, the usage of NPEO's in L&C products for domestic usage in 1995 and for industrial applications in 2000 is to be stopped. The NVZ is thus running ahead of this.

On April 24, 1990 an agreement has been reached between the ministry of VROM and NVZ on the replacement of the fabric softeners DTDMAC, DHTDMAC and DSDMAC by environmental friendlier alternatives. This has occurred during 1992. The alternative ingredients were at the time evaluated by VROM and RIVM.

In the summer of 1995 the investigation of the fragrance industry on the ecotoxicity of nitromusks will be completed and is an environmental risk assessment probably possible. When the data become available, RIVM will be asked to perform this assessment.

The NVZ has, also after pressure from the Ministry of VROM and comparable to Germany, almost abounded the application of nitromusks in L&C products. The used quantities of nitromusks have been reduced significantly over the last two years. There also is international attention for these compounds. On the fourth North Sea ministers conference in Esbjerg (June 8 and 9 1995) a decision has been taken to take action in the applicable national forums to a.o., replace musk xylenes with safer or non dangerous substances, if alternatives are available.

On the subject of phosphates I can announce that the targets of the 1987 Phosphate Covenant have been reached. Early 1990 all laundry detergents for domestic use were phosphate free. In 1993 in domestic as well as institutional and industrial L&C products still about 760 tonnes phosphate, expressed as free P, was used. In 1990 the total usage still was 1380 tonnes, which means a reduction by 55%. Of these 760 tonnes a part is removed in the sewage treatment plants (which part is unknown), and a part is discharged to surface waters directly. For comparison: the total amount P, expressed as free P, that ends up in the surface water because of draining from agriculture, emissions by industry and the effluent of the sewage treatment plants (thus including the P-emissions of the L&C), was about 16,000 tonnes in 1993.

Finally, I want to announce that in February 1995 further to the EEC Directive 880/92 the criteria for an EU ecolabel on detergents were accepted by the European Commission. The expectation is that in Fall of 1995 the first detergents with this label will appear on the market.

The criteria for hand and machine dishwashing products for domestic use, general cleaning products and special cleaners for windows, furniture, ovens, carpets and floors will be developed, starting with that of dishwashing products. The criteria for the latter mentioned product category are expected to be published in 1996.

Yours sincerely,
The Minister of Public Housing, Physical Planning
and Environmental Management

Margaretha de Boer