

FACT SHEET ON CLEANING PRODUCTS & METHODS

The health & environmental hazards of synthetic cleaning products

The purpose of cleaning is to reduce dirt, dust, bacteria and moulds from surfaces. Unfortunately modern societies have developed a cleanliness and 'germ hating' obsession which has led to the development of ever more powerful cleaning agents. The average household now has under its kitchen sinks and in its laundry cupboards a collection of synthetic chemicals that would only have been found in a laboratory 50 years ago.

These chemicals are not just toxic if we accidentally eat or drink them. The volatile organic chemicals (VOC's) contained in them enter our indoor air and then our lungs as we use them and many of the other ingredients are easily absorbed by the skin. They also indirectly affect our long-term health when they pollute our waterways.

INGREDIENT	COMMONLY FOUND IN	ENVIRONMENTAL & HEALTH EFFECTS
Petroleum based detergents	<ul style="list-style-type: none"> Laundry powders & liquids Multipurpose cleaners Toilet and bathroom cleaners Pre-wash stain removers 	<ul style="list-style-type: none"> Many contain toxic impurities such as benzene They are heavily polluting in their production Allergic irritation of skin, lungs, sinuses, eyes, Biodegrade slowly & incompletely
Solvents	<ul style="list-style-type: none"> Multipurpose cleaners Oven cleaners Pre-wash stain removers 	<ul style="list-style-type: none"> Cause brain damage at high dose & can be addictive Have been linked to infertility and miscarriages Solvents contribute to air pollution & smog
Optical Brighteners	<ul style="list-style-type: none"> Laundry powders & liquids 	<ul style="list-style-type: none"> They can cause skin irritation and allergies Are petroleum derived and are slow to biodegrade
Synthetic fragrances	<ul style="list-style-type: none"> All types of cleaners 	<ul style="list-style-type: none"> Can cause reactions to chemically sensitive people Most are petroleum derived & biodegrade slowly
Chlorine bleaches & compounds	<ul style="list-style-type: none"> Toilet cleaners Bathroom mould removers Auto. dishwasher powders Bleaches 	<ul style="list-style-type: none"> Originally used as a poison gas in WW1 Irritates & damages throat & eyes, worsens asthma Toxic to the brain and nervous system Causes skin irritation and premature skin ageing
Phosphates	<ul style="list-style-type: none"> Laundry powders & liquids Automatic dishwasher powders 	<ul style="list-style-type: none"> An excess of this contributes to the eutrophication of waterways which often leads to toxic blue green algal blooms
Ammonia	<ul style="list-style-type: none"> Multipurpose cleaners Oven cleaners Cloudy Ammonia 	<ul style="list-style-type: none"> The vapours are highly irritating to eyes and nose High concentrations attack the lung membranes & worsens asthma, bronchitis and emphysema.
Phenol/Phenyl (Carbolic acid)	<ul style="list-style-type: none"> Disinfectants 	<ul style="list-style-type: none"> Extremely toxic when swallowed & are rapidly absorbed by the skin Repeated exposure can damage the brain, liver, kidneys and spleen. Kills the bacteria in sewerage-treatment works
NTA	<ul style="list-style-type: none"> Laundry powders & liquids Automatic dishwasher powders 	<ul style="list-style-type: none"> It has cancer causing properties & can cause birth defects Phosphate replacement which is slow to biodegrade
EDTA	<ul style="list-style-type: none"> Laundry powders & liquids Auto. dishwasher powders 	<ul style="list-style-type: none"> Degrades slowly and forms compounds with heavy metals bringing them back into the water supply

Recommended cleaning methods & products

The purpose of cleaning is to reduce dirt, dust, bacteria and moulds from surfaces. The main methods we recommend to achieve this are:

1. (a) Non chemical - using super-heated steam cleaners.

With the growing concern of the effects of cleaning chemicals on our health and the environment these cleaning machines use water and electricity to produce high temperature (120C) pressurised steam (3-4 bar) that is able to clean and disinfect virtually any surface. Water at this temperature is a powerful solvent and the clothes attached to the steam head remove the dirt released by the action of the high pressure steam.

These have become increasingly popular, particularly in Europe, over the past decade as the move away from carpeted floors to hard floor surfaces for indoor pollution and allergy reasons has led to a need to effectively clean large surface areas.

For large scale domestic or commercial cleaning, high-pressure steam cleaners can perform all tasks other than cleaning clothes and dishes.

We believe they will eventually be more common than vacuum cleaners as they have many more uses. Some of the key benefits are;

- a) Cleans, disinfects and kills mould on any surface from floors, tiles, ovens, bedding to car upholstery using only tap water (approx 2 litres per hour), electricity and a variety of attachments. Cleaning chemicals and disinfectants are eliminated.
- b) Is very suitable for asthma and allergy sufferers and chemically sensitive people as it kills dust mites (university tested) and moulds without using synthetic chemicals.
- c) Saves the average household around \$300 per year in cleaning chemicals and disinfectants and even more if carpets and lounges are regularly professionally cleaned - this would cost the average size house an additional \$100 pa.
- d) From the environmental perspective there is a saving of a tremendous amount of packaging, water and transport pollution.

High quality models are available from Polti, Karcher and Electrolux.

1 (b) Reduced chemical usage - Micro-fibre cleaning cloths

Micro-fibre cloths can replace or greatly reduce the need for cleaning chemicals. Microfibre cloths are made of minute fibres that are split in such a way as to trap dirt, dust and moisture from surfaces. Some are quite abrasive also.

In a recent Choice survey the majority of trialists thought the microfibre cloths did a better job than their regular cloth, and could clean most things without chemical cleaning products. Enjo is one of major quality brands.

2. Plant Chemistry based cleaning products

These form two main types

- a) The traditional DIY mixtures of soap, vinegar, Bi-carb and eucalyptus oil which, compared to powerful petrochemical based cleaners, require some additional effort and knowledge. On the other side of the equation, they are generally much cheaper.
- b) Ready made commercial products predominantly made from plants and minerals that perform equally to the commercial products. They generally sell at comparable prices to premium brands.

3. Recommended products

On the following page is a table detailing products which have a reduced environmental impact and a lower risk profile from an occupational health and safety viewpoint.

These are the cleaners we have good detailed ingredients listings for, which allow us to form a judgement on their health and environmental impact. Most are entirely petrochemical free, are mainly plant & mineral derived and generally have either been:

- developed to minimise the risk of allergic reactions
- widely used by allergic and chemically sensitive consumers

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CLEANING SURFACE	PRODUCT NAME	COMMENTS
Laundry	<ul style="list-style-type: none"> Planet Ark Laundry Powder Aware Laundry Powder Ecover clothes washing powder & liquid 	<p>Medically tested to be low allergy</p> <p>Not fragrance free - has essential oil fragrances</p> <p>Not fragrance free - has essential oil fragrances</p>
Pre wash stain removal - soaker	<ul style="list-style-type: none"> Herbon pre wash powder Ecover Laundry bleach 	<p>Does contain a some phosphate</p> <p>Pure oxygen bleach</p>
Pre-wash stain removal - liquid	<ul style="list-style-type: none"> Ecover Natural Stain remover Herbon Multi purpose cleaner 	<p>Not fragrance free - has essential oil fragrances</p> <p>May cause transient reactions in hypersensitive people</p>
Dishwashing	<ul style="list-style-type: none"> Ecover Washing-Up Liquid Herbon Dishwashing liquid 	<p>Has a essential lemon oil fragrance</p> <p>Medically tested to be low allergy</p>
Auto dish washing machine detergents	<ul style="list-style-type: none"> Ecover Dishwasher tablets Ecover Auto Dishwashing Powder Herbon auto dish powder Ecover Rinse Aid Herbon Rinse aid 	<p>Does contain some phosphate</p>
Ovens	<ul style="list-style-type: none"> Amaze Cleaning paste Ecover Crème cleaner 	<p>Contains glycerine to reduce grease adhering to sides of oven</p>
Bathroom & kitchen surfaces	<ul style="list-style-type: none"> Amaze cleaning paste Herbon Multi-purpose cleaner Ecover Multi-surface spray 	
Toilets	<ul style="list-style-type: none"> Ecover Toilet Cleaner Herbon Multi-purpose cleaner White vinegar undiluted 	<p>Add 5% eucalyptus oil if requiring disinfection</p>
Floors – timber/tile	<ul style="list-style-type: none"> Livos Latis soap concentrate Ecover Floor cleaner 	<p>Dilute as per instructions - anti-static due to beeswax</p>
Timber surfaces	<ul style="list-style-type: none"> Latis or Trena soap concentrates 	<p>Dilute as per instructions - anti-static due to beeswax</p>
Window cleaner	<ul style="list-style-type: none"> Methylated spirits mixed with 50% water 	<p>Vary mixture dependent on amount of dirt on windows</p>
Painted surfaces	<ul style="list-style-type: none"> Livos Trena soap concentrate 	<p>PH neutral - dilute as per instructions</p>
Disinfectant/Deodoriser	<ul style="list-style-type: none"> Eucalyptus oil 5% mixed with water in spray bottle - 10% for hospital grade 	<p>Can effect terpene sensitive people</p>
Mould killer	<ul style="list-style-type: none"> Hydrogen peroxide bleach (min 6% wv) White vinegar undiluted 	<p>Leave for minimum 2 hours</p> <p>Leave overnight</p>