

CTPA INFORMATION SHEET

Safety of “Brazilian” Hair Straighteners

CTPA (the Cosmetic, Toiletry and Perfumery Association*) has previously issued (December 2009, January 2010) warnings and advice on some new treatments originally emanating from Brazil which provide long-lasting hair straightening effects but which may be illegal cosmetic products as they contain much higher levels of some ingredients than is legally allowed in Europe.

More information on this is available on our consumer website thefactsabout.co.uk.

We are aware that much confusion has arisen around these types of product owing to mixed messages on what ingredients can or can't be used, different claims about what ingredients are actually being used and products falsely claiming to be “formaldehyde free”. Many different ingredient names are also being discussed on the internet. We would like to help clarify these and other issues involved.

The reason many of these “Brazilian” hair straightening products are possibly illegal is because they contain very high levels of formaldehyde, in some instances between 10 and 75 times more than is legally allowed. In addition, ingredient labelling may be inadequate and some claims relating to being free from formaldehyde are misleading.

These “Brazilian” hair straightening products should not be confused with other hair relaxers and straighteners that hair professionals may be more familiar with, that use lye, no-lye and thioglycolate technology.

Ingredient Discussions

Formaldehyde is a gas with a pungent, choking odour. [Formaldehyde](#) is safe for use in cosmetic products up to legally permitted levels. However, when used in excessively high levels, as can be seen in some “Brazilian” hair straighteners, and when very high temperatures are also involved in the straightening procedure, it is possible that the client and the hair professional could suffer skin irritations, breathing difficulties and even collapse.

Formaldehyde is legally allowed in the EU for safe use in cosmetics, up to specific concentrations:

- Oral hygiene products - up to 0.1%
- Nail hardeners - up to 5%
- Up to 0.2% in all other products.

Formalin is another name for a solution of formaldehyde; i.e. formaldehyde dissolved in water and containing approximately 36-39% formaldehyde.

Methylene glycol is a substance formed when formaldehyde is dissolved in water. Some manufacturers allege that methylene glycol is completely distinct from formaldehyde and since their product uses formaldehyde in solution, the ingredient actually present is methylene glycol and not formaldehyde itself.

The use of methylene glycol as an ingredient in cosmetic products is not restricted; no maximum allowed concentration has been set. But, its use and the final cosmetic product must be safe. Where present, it should appear in the ingredients list as “methylene glycol”.

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Methyl glycol is a completely different substance from methylene glycol, even though the names might appear similar. Methyl glycol (another name for it is methoxyethanol) is banned from use as an ingredient in cosmetics in Europe.

Glutaraldehyde is allowed for use in cosmetics up to a maximum safe concentration of 0.1%. Where present, it will be labelled as ‘glutaral’ in the ingredients list and the product must also be labelled with the words “contains glutaraldehyde” if it is present above 0.05%.

Keratin is a protein found primarily in skin, hair and nails which gives those body parts structure and support. It exists as strands. Certain substances, including formaldehyde, can react with the keratin and cause structures like bridges to form in between the individual strands of keratin making the keratin stronger. In the hair straightening process, the combination of washing, application of the hair straightening product and the heat means the keratin in the hair is softened and the extra bridges can be formed. After the straightening tools are applied and the hair cools, the keratin sets, preventing the curl from re-appearing.

“Free from formaldehyde” Claims

CTPA is aware that some “Brazilian” hair straightening products are claiming to be formaldehyde-free when this is not actually the case. Sometimes formaldehyde has been added itself or another ingredient has been added that works by releasing formaldehyde in the product. Either way, claiming such products are free from formaldehyde is misleading, which is not in conformity with EU and UK law on cosmetic products.

This concern is in addition to the problem of excessively high, unsafe, and therefore illegal levels of formaldehyde being used in some cases.

Legal Cosmetics Products – Safety Assured

There are stringent [EU rules](#) surrounding the manufacture of cosmetic products and making them available to buy and use. These laws require manufacturers and importers to carry out a rigorous [safety assessment](#) by a professionally qualified safety assessor before placing a cosmetic product on the market. This includes products used in the professional setting, such as in hair salons. The assessment takes into account the finished product and all of the individual ingredients as well as how, how often and where the product is to be used. These assessments may be inspected at any time by the enforcement authorities, usually Trading Standards in the UK.

A [full list of ingredients labelled](#) on pack is also required by law. This list should contain the names of all the ingredients added at the time of manufacture. If a mixture was added to the product, the names of the individual ingredients in the mixture have to be listed separately.

So, if the product was made with a mixture of formaldehyde and water, both of these ingredients must be included in the ingredient list. If the product was formulated by using a pre-mix of formaldehyde and water in which methylene glycol has been produced, certainly methylene glycol and water must appear in the ingredient list; formaldehyde must also be declared unless it can be demonstrated that all of the formaldehyde has been consumed during the creation of the pre-mix.

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Even if an ingredient has other chemical or common names, the name required by law for labelling is the agreed International Nomenclature of Cosmetic Ingredients name, known as INCI. So, whichever European country you buy your cosmetic product in, the ingredient names will be the same. These INCI names have also been adopted by many non-EU countries worldwide.

As well as ingredient labelling, the cosmetics laws also require products to be labelled with the words "contains formaldehyde" if the concentration of formaldehyde in the finished product is more than 0.05%.

In addition to the laws for cosmetic products, there are also legal requirements for employers under health and safety legislation. In the UK, this legislation requires that a person to whom a substance is supplied should be provided with adequate information about the substance so that it can be used and disposed of safely.

Illegal Products – RAPEX Alerts/Product Withdrawal

RAPEX is the European authorities' single rapid alert system for consumer products deemed to be dangerous.

The RAPEX system posts notifications between the regulating authorities across the European member states informing each other of activities in any particular country so that each may check to see if the same product is on sale elsewhere and take whatever action they feel is appropriate. That a product has been taken off the market in one country does not automatically mean it is not being sold in other countries. Authorities elsewhere would be unlikely to ignore the action in the first member state and are likely to look out for the product in question and may well take similar action.

CTPA is aware of a number of “Brazilian” hair straightening products being highlighted on RAPEX and withdrawn, notably in Ireland. The US and Canadian authorities are also reported to be removing certain “Brazilian” straightening products from their markets.

What should I be asking?

If you are a hair salon professional:

Employers do need to know some information about the products used in their salon in order to assess any work involving “substances hazardous to health” and to consider the risks (under COSHH, Control of Substances Hazardous to Health Regulations).

The risk assessment will involve the salon management ensuring the products being used comply with the necessary cosmetics legislation, but will also involve assessing the level of training of the individual hairdresser and how they tailor the treatment to the client's own hair type and condition.

Salons themselves should be happy to offer this reassurance to their customers as it is a clear indication that the salon management takes its responsibilities seriously and does not place its clients at risk.

Salons should check with their suppliers to ensure the products they are using meet the legal requirements. The products should have ingredient (INCI) lists and be labelled with an address in a European country. You may want to ask for a declaration that the product is fully compliant with the EU Cosmetics Directive, transposed in to UK law by the UK Cosmetic Products Safety Regulations

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2008, as amended (these are the strict safety laws covering cosmetic products). Suppliers may be prepared to provide a copy of the top line safety assessment for the product and even give evidence that the qualifications of the safety assessor meet the UK requirements. (Please note that there is no legal obligation for suppliers to do this but, given the potential problems with illegal products, suppliers may be willing to provide this extra information to re-assure salons of their products' safety).

Be cautious if you are advised to introduce fans in your salon or are told that your air-conditioning filters will be affected. This may suggest the product is likely to release fumes (of formaldehyde) in use.

If you are in any doubt, CTPA would recommend not using the product.

If you are a client:

Ask if the salon has carried out a risk assessment for their hair straightening treatment before asking the hairdresser to proceed.

What should I do if I have a concern?

If you think you have had an adverse reaction to such a treatment, you should contact the salon in the first instance and also see your doctor if necessary. If you are still concerned, you may report this to your local Trading Standards Office to investigate further or seek advice from a Citizens Advice Bureau.

If you are a hair professional then you should alert your salon manager and/or your supplier, as well as seeking medical advice if necessary. Where you think a product does not comply with the legislation, you should report this to your local Trading Standards Office without delay.

*The Cosmetic, Toiletry and Perfumery Association (CTPA) is the voice of the cosmetic, toiletry and perfumery industry in the UK. CTPA membership covers approximately 85% of the UK cosmetics market by value. Members are manufacturers and brand owners of cosmetic and personal care products as well as raw material suppliers and service providers; membership comprises both multinational companies and SMEs. CTPA's goals are to represent the industry and to promote good working practices to ensure that consumers' needs are met and that they are provided with the very best products.

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