

Australian Competition and Consumer Commission

Complaint against Ross Cosmetics Aust. Pty. Ltd.



July 24th, 2012

Who is making the Complaint?

Organisation: Friends of the Earth Australia Inc
Address: PO Box 222, Fitzroy VIC 3065
Contact Person for the Complainant:
Dr Gregory Crocetti (03) 9024 3404 / 0403 733 628
gregory.crocetti@foe.org.au

Solicitors for the Complainant

Shayne Daley & Associates
Level 13, 200 Queen Street
Melbourne Vic
Ph 86486587
Email: sdaley@sdlaw.com.au

Who is the complaint against?

Organisation: Ross Cosmetics Aust. Pty. Ltd
Telephone: +61 3 9338 5222
Email : rosshq@rosscosmetics.com.au

Office and Manufacturing Plant:
14-22 Carrick Drive Tullamarine
Victoria Australia 3043

Postal Address:
Locked Bag 15 Tullamarine
Victoria Australia 3043

ACN: 004 249 530
ABN: 33 004 249 530
TGA Licence Number: 1291

Description of conduct for which complaint is being made

The basis of the complaint is that Ross Cosmetics is misrepresenting the nature of a component product of sunscreen applications which it supplies to third parties in manufactured sunscreens in Australia.

The component product is a chemical substance known as zinc oxide. The product is manufactured by Symrise (www.symrise.com) and marketed under the name 'Zinc Oxide Neutral (104702) (Schedule 1). To our knowledge Ross Cosmetics has been representing Zinc Oxide Neutral as "not containing nanoparticles" or "agglomerates that are composed of nanoparticles" since at least October 2011.

A "Nano" particle (nanoparticle) is a particle whose size is less than 100 nanometres. However, the term 'nanoparticle' does not account for all different types of nanotechnology objects and devices, so the term 'nanomaterial' has been created to define all possible shapes and configurations at the nano-scale. Most significantly here, official definitions of nanomaterials, both here in Australia (NICNAS) and internationally (ISO) include nanomaterials as aggregates/agglomerates (clumps) of nanoparticles.

The Complainant says that Zinc Oxide Neutral is comprised of manufactured agglomerates of nanoparticles (approximately 41 nanometres in size). In these circumstances, the Complainant says it is false and misleading for Ross Cosmetics to represent that Zinc Oxide Neutral as "not containing nanoparticles". This is discussed further below.

Furthermore, the product Zinc Oxide Neutral as supplied by Symrise, is used as a zinc oxide ingredient in sunscreen products worldwide. Here in Australia, at least four different sunscreen brands use this product in some of their sunscreen formulations as an active ingredient to block harmful UV rays from the sun.

There is growing evidence to support a precautionary approach to the use of nanomaterials in sunscreens, as detailed in the attached report (Schedule 13). Growing public concern around the potential dangers from the use of manufactured nanomaterials in sunscreens has led to several sunscreen brands electing to purchase 'non-nano' formulations and to market their brands as 'nanoparticle-free', 'non-nano' or 'nano-free'. The complainant says there is a significant section of the general public who are aware of these concerns and who, as a consequence, choose to use sunscreen products which are nano-free.

The abovementioned public concerns are referred to in a number of public polling surveys which show a significant section of the general public has concerns about issues related to the safety of untested nano-ingredients in sunscreens and the labelling of sunscreens containing nano-ingredients. Further details of these surveys and related media are annexed to this complaint (Schedule 23 & 24).

It would also appear that some of the sunscreen brands are using Zinc Oxide Neutral in their own formulations are doing so on the representations by Ross Cosmetics that Zinc Oxide Neutral is free from nanoparticles.

History of nano sunscreen products

1. In 2004-2005, serious concerns began to emerge in scientific studies and elsewhere about the safety and desirability of the use of nano-particles in sunscreens.
2. In September 2006, the Australian Government regulator National Industrial Chemicals Notification and Assessment Scheme (“NICNAS”) published an Information Sheet on Nanomaterials which explained “a nanomaterial is a material having at least one dimension 100 nanometres or less, and can be nanoscale in one dimension (eg. surface films), two dimensions (eg. strands or fibres), or three dimensions (eg. particles) – and can exist in single, fused, aggregated or agglomerated forms...” (Schedule 2)
3. The product ‘Zinc Oxide Neutral’ has been available on the Australian or global market since 2008 or earlier.
4. Zinc-oxide formulations in the nano range have desirable attributes in terms of transparency, spreadability and the like. From information contained in the ‘Zinc Oxide Neutral’ product guide, it would appear this product was marketed from Symrise to Ross Cosmetics as agglomerates of nanoparticles.
5. Subsequently, in October 2010, NICNAS (Schedule 3) and the International Organisation for Standardisation (ISO/TS 80004-1:2010) (Schedule 4) both launched formal definitions for nanomaterials. The Complainant says that according to these definitions, the ‘Zinc Oxide Neutral’ technology is a nanomaterial.
6. In 2012 the Complainant sought an opinion from Dr. Peter Hatto (former chair of the ISO TC229 Nanotechnology committee) - as to the whether the ‘Zinc Oxide Neutral’ product is a nanomaterial. This opinion states:

“Having reviewed the information on 'Zinc Oxide Neutral' presented in the commercial literature from Symrise and contained in US patent number 5,527,519, and noting that the material is stated as having an average primary particle size of 41 nm it is my opinion that 'Zinc Oxide Neutral' is a nanomaterial according to the definition given in ISO TS 80004-1:2010-Nanotechnologies-Vocabulary-Core terms, definition 2.4, i.e. 'material with any external dimension in the nanoscale (approximately 1 to 100 nm) or having internal structure or surface structure in the nanoscale.’”

A copy of this email dated 18 June, 2012 is attached to this complaint (Schedule 5).

The complainant believes that by representing Zinc Oxide Neutral as free from nanoparticles or agglomerates of nanoparticles directly to sunscreen brands and Friends of the Earth, Ross Cosmetics is engaging in misleading and deceptive conduct, and as such, is likely to be in violation of the *Competition and Consumer Act (2010)*.

Correspondence between Friends of the Earth & Ross Cosmetics

The presentation by Dr. Victoria Coleman at the National Measurement Institute presentation at the ICONN (International Conference On Nanoscience & Nanotechnology) conference, found Coles 'Sports' sunscreen to contain nanomaterials (Schedule 6).

Following this revelation, Friends of the Earth sought further information from Coles Supermarkets in relation to the zinc oxide used in their 'Sports' sunscreen product (Schedule 7).

In response, Coles Supermarkets, wrote to Ross Cosmetics seeking further information. Coles received a response from Ross and subsequently sent the 'Zinc Oxide Neutral' product guide to Friends of the Earth on March 13th (Schedule 7). Additional emails around this date from Sunzapper and Coco Island sunscreens also confirmed the use of this ingredient by Ross Cosmetics in manufacturing their sunscreen products.

On March 15th 2012, Friends of the Earth (FOE) sent an email to Ross Cosmetics (Schedule 8), underscoring our new understanding that the ingredient 'Zinc Oxide Neutral' was based on agglomerates of nanoparticles and as such was a nanomaterial according to major definitions. Furthermore, FOE alleged in this email that the marketing of Zinc Oxide Neutral by Ross Cosmetics amounted to misleading conduct and stated we intended to lodge an ACCC complaint about this conduct.

However, in good faith FOE did not lodge a complaint against Ross Cosmetics with the ACCC at that time – and offered Ross Cosmetics an opportunity to explain the circumstances whereby Ross Cosmetics either came to make these mistakes or were indeed themselves misled by their ingredient supplier Symrise.

In response (26th March, 2012), Ross Cosmetics wrote somewhat similar letters to affected sunscreen brands (Schedule 9) and Friends of the Earth (Schedule 10).

These letters maintained their products were free of nanoparticles and rejected the 'FoE definition' on the basis that this is "*far from a firm definition*", nor is it "*written into Australian legislation*".

Furthermore, Ross Cosmetics continue to make their 'nano-free' and 'nanoparticle free' claims on the basis that their products comply with their internal 'Ingredient & Formulation Policy'. This new policy re-defines 'nanoparticle-free' to exclude any materials exceeding 100 nm in size – including agglomerates and aggregates of nanoparticles', arguing that these "structures are chemically equivalent to similarly sized (macro) particles".

In support of this new Ross definition, the company refers to the definition from the European cosmetic industry body COLIPA, which also excludes any materials above 100 nm.

Finally, Ross represented to certain sunscreen brands that "*FoE have been falsely representing many market products as being nano-free according to their flawed definition*", and that our "*....Safe Sunscreen Guide...may be slanderous to brand owners by omission...*"

We assert that these letters from Ross Cosmetics employees to sunscreen brand customers and Friends of the Earth (on March 26, 2012) acknowledge the Zinc Oxide Neutral product is based on agglomerates of primary nanoparticles, and make clear that Ross Cosmetics understands that this product was a nanomaterial, according to all relevant Australian and international definitions.

Complainant's Involvement/Claim for Damages

Since 2008, Friends of the Earth Australia has produced the "Safe Sunscreen Guide" annually (Schedule 11). This guide informs the public which sunscreens in Australia contain manufactured nanomaterial ingredients and which brands claim to avoid using manufactured nanomaterial ingredients in their products. The Safe Sunscreen Guide is based on signed responses to a survey from over 130 sunscreen brand representatives. The survey results in this guide show that many of these brands consider that their product is "nano-free" despite containing 'Zinc Oxide Neutral'. It seems they have come to this view because of representations made to them by Ross Cosmetics that 'Zinc Oxide Neutral' is a product free from nanoparticles.

The Safe Sunscreen Guide relies on and incorporates information from those sunscreen brands that use 'Zinc Oxide Neutral' as a means of informing the general public as to which sunscreen brands contain nanomaterials and which do not. At least 10,000 hard copies and 50,000 digital copies of the guide were known to be distributed to Australian homes and schools between December 2011 and February 2012. Further distribution by the channel 7 program (Today Tonight - Schedule 25) and channel 10 program (The Project) following television appearances would likely have resulted in thousands more copies distributed to the Australian public in January 2012.

This series of events effectively means the Safe Sunscreen Guide is, itself inaccurate in stating that certain sunscreen brands are "nano-free" (non-nano) when it seems they are not.

It took the Complainant's employees approximately five months to prepare and undertake the survey, verify the data, design, print, promote and distribute the guide. Subsequent additional costs for printing, distribution and promotion bring the total Safe Sunscreen Guide expenses in the order of \$73,000. Many thousands of Safe Sunscreen Guides have already been distributed since the most recent release on December 1, 2011. However, since February 2012, approximately 45,000 printed guides have been withdrawn and destroyed since being rendered inaccurate in the manner described above.

Friends of the Earth Australia's Safe Sunscreen Guide

This publicly available guide lists approximately 133 different brands of sunscreen and cosmetics containing sunscreen. Each brand is separated into one of four categories:

- Nano and chemical-free (Dark green)
- Nano-free (Light green)
- May Use Nano (Amber)
- Use Nano (Red)

Brands manufactured by Ross Cosmetics were listed in the nano-free section, on the basis of signed statements from the sunscreen brands and in most cases supplementary particle distribution graphs provided by Ross Cosmetics to support nanoparticle-free claims. As a result of Ross Cosmetics' apparently misleading and deceptive conduct, at least four sunscreen brands were inaccurately listed as 'nano-free', when they are in fact based on agglomerates of nanoparticles.

Following the revelations of this inaccuracy, Friends of the Earth Australia has blocked all further web access to the Safe Sunscreen Guide (Schedule 12) and withdrawn and destroyed 45,000 printed copies. We have also worked with other groups to recall from display and circulation further thousands of copies of our guide.

As a result of the inaccuracies caused by Ross Cosmetics' apparent misleading and deceptive conduct, Friends of the Earth Australia has suffered serious reputational loss. The inaccuracies in our guide have been the focus of the National Measurement Institute presentation and subsequent discussion at the ICONN (International Conference On Nanoscience & Nanotechnology) conference (Schedule 6), media coverage and government commentary. It has been suggested by many commentators that the inaccuracies result from our error, rather than stemming from false statements provided to sunscreen brands by Ross Cosmetics.

Technical Background Information

1. The definition of ‘nanomaterial’

The complainant relies on the definitions of nanomaterials created here in Australia by NICNAS (Schedule 3) and the ISO definition (Schedule 4) - created internationally by 32 member countries (including Australia).

Additionally the Complainant is aware of further definitions of nanomaterial in other jurisdictions. Two examples are:

(a) *US National Nanotechnology Initiative:*

“Nanomaterials are all nanoscale materials or materials that contain nanoscale structures internally or on their surfaces. These can include engineered nano-objects, such as nanoparticles, nanotubes, and nanoplates.”

(b) *European Union:*

“A natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where...one or more external dimensions is in the size range 1 nm - 100 nm.” [specifies that 50% or more of the number of particles in a sample must be as described]

2. Claims from Symrise in relation to the Zinc Oxide Neutral product

The Symrise product guide Zinc Oxide Neutral (104702) ‘Microfine Pigment for Effective UVA and UVB Protection’ describes Zinc Oxide Neutral as agglomerates of nanoparticles, and therefore a ‘nanomaterial’:

The Zinc Oxide Neutral product guide (Schedule 1) states:

- It is nearly transparent to visible light (p.2)
- No unacceptable whitening of the skin, even when used at high concentrations or after repeated application of cosmetic products containing Zinc Oxide Neutral (p.2)
- It is an agglomerate (on average 2 µm), i.e. 2,000 nm; composed of primary zinc oxide particles [nanoparticles] that are nano-scale (on average about 41 nm) (p.3)

3. Claims from Ross Cosmetics in relation to the Zinc Oxide Neutral product

Ross Cosmetics has directly told Friends of the Earth that the sunscreen products they manufacture (Auscreen) are free of nanoparticles or agglomerates composed of primary particles <100 nm in size.

- Auscreen Questionnaire October 2011 (Schedule 14)

A Ross Cosmetics employee signed the Questionnaire to form the basis of listing of this brand in Friends of the Earth’s Safe Sunscreen Guide. In response to Question 2, Ross Cosmetics indicated this sunscreen brand was free of nanoparticles or agglomerates composed of primary particles <100 nm in size.

Ross Cosmetics has directly told the general public the sunscreen brands they manufacture do not contain nanoparticles

The website for Auscreen sunscreens claims “Auscreen is free from nanoparticles” downloaded February 7, 2012 (Schedule 15). <http://www.auscreen.com.au/>

Ross Cosmetics has told sunscreen brand customers that the sunscreen products they manufacture are free of nanoparticles.

- Ross Oct2011 – Letter to Coles Supermarkets

In response to Coles’ enquiry regarding ‘Questionnaire regarding the use of manufactured nanoparticles in primary and secondary sunscreens October 2011’, a Ross employee confirmed:

“Ross Cosmetics are pleased to confirm that the Sunscreen products listed below do not contain any nanoparticles in the form of Inorganic UV Filters.” (Schedule 16)

Ross Cosmetics has provided sunscreen brand customers with data suggesting their sunscreen products were manufactured with a zinc oxide ingredient that only contains particles approximately 1 micrometre in size.

- Zink Oxide Neutral’ Particle Distribution Graph (Schedule 17)

Coles Supermarket’s requested further data from Ross Cosmetics for the Friends of the Earth questionnaire. In response, Ross Cosmetics provided the particle size distribution curve titled ‘Zink Oxide Neutral’. This graph signifies that zinc oxide particles are approximately 1 micrometre in size and there are no particles below 500 nanometres in size.

This ‘Zinc Oxide Neutral’ graph was also sent to Friends of the Earth by

- Ross Cosmetics employee Tina Henry on October 7, 2011.
- SunZapper employee James Mare on March 8, 2012
- Chemisell (Coco Island) employee Simon Smith on March 14, 2012

This is the identical graph as the Zink Oxide Neutral graph as presented on page 4 of the Symrise product guide ‘Zinc Oxide Neutral (104702)’. (Schedule 1)

Ross Cosmetics provided independent analysis data from Currenta GmbH (Germany) for the product Bayoxide Z neutral VP AL 5494

Bayoxide Z neutral VP AL 5494 (Lanxess) is the same product as Zinc Oxide Neutral (104702) under license from Lanxess to Symrise. This is confirmed by a Ross Cosmetics employee via Coco Island sunscreens (Schedule 18)

The independent analysis report from Currenta GmbH (Germany) for the product Bayoxide Z neutral VP AL 5494 (Schedule 19) claims this technique is suitable for determining the fraction of (unbound) nanoparticles (<100 nm) in a sample. In conclusion from this analysis, this report states:

“The multiple determination of the mass portion below 100 nm resulted in a share of 2.0% (1.8% / 2.0% / 2.1% / 2.2%) in the total sample. This share was analysed again using an analytical ultracentrifuge. The analysis showed that in the range 100 nm to 5 nm no particles could be detected and therefore only soluble shares were present.”

Any particles greater than 100 nm in size or agglomerates of nanoparticles are not assessed by this analysis.

4. Ross Cosmetic’s customers (sunscreen brands) believed Ross Cosmetic’s claims to mean that their products did not contain manufactured nanoparticles, agglomerates or aggregates of manufactured nanoparticles

See signed questionnaire responses from the Coles, Sunzapper and Coco Island (Schedule 20 - 22) stating that their products are free of primary particles in the nanoscale, including agglomerates or aggregates of these nanoparticles.

Schedule

Evidence supporting the claim that Zinc Oxide Neutral is a nanomaterial

1. Zinc Oxide Neutral (104702) '*Microfine Pigment for Effective UVA and UVB Protection*' produced by Symrise
2. NICNAS Information Sheet on Nanomaterials, 2006
3. NICNAS Nanomaterial definition (NICNAS-Guidance on New Chemical Requirements for Notification of Industrial Nanomaterial), issued October 5, 2010
4. ISO Nanomaterial Definition (ISO-TS_80004-1-2010)
5. Expert opinion from Peter Hatto, former chair of the ISO TC229 Nanotechnology standards committee (June 18, 2012)
6. Presentation by Dr. Victoria Coleman at the ICONN conference (in Perth, February 6, 2012) outlining testing of six commercial sunscreens (including Coles 'Sports - Clear Zinc' product)

Correspondences between Friends of the Earth, Ross Cosmetics and Sunscreen brands

7. Emails to/from Coles Supermarkets (October 2011 – March 2012)
8. Friends of the Earth emails to Ross Cosmetics - March 8th, 15th, 20th & 28th 2012
9. Ross Cosmetics letter to sunscreen brand 'customers' - March 26th, 2012
10. Ross Cosmetics letter to Friends of the Earth – March 26th, 2012

FoEA Safe Sunscreen Guide & Sunscreen report

11. Friends of the Earth's Safe Sunscreen Guide (Summer 2011-2012)
12. Screen capture of FOE website withdrawal of the Safe Sunscreen Guide (Feb 2012)
13. 'Nano-ingredients in Sunscreen' report, released by Friends of the Earth and the Public Health Association of Australia (July 2012)

Examples of Non-Nano claims from Ross Cosmetics

14. Ross response for Auscreen sunscreen to FOE Questionnaire (October 2011)
15. Auscreen website nano-free claims (Feb 7, 2012)

Material in preparation of the Safe Sunscreen Guide

16. "do not contain any nanoparticles" Certification from Ross Cosmetics to Coles Supermarkets, October 2011
17. Zinc Oxide Neutral Particle Distribution Graph provided by Auscreen
18. Email confirming that BayOxide Neutral from Lanxess is the same product as Zinc Oxide Neutral from Symrise
19. Independent analysis report from Currenta GmbH (Germany) for the product Bayoxide Z neutral VP AL 5494
20. Signed Questionnaire response from Coles Supermarkets (page 1 of 5) (October 2011)
21. Signed Questionnaire response from SunZapper sunscreen (page 1 of 5) (October 2011)
22. Signed Questionnaire response from Coco Island sunscreen (page 1 of 5) (October 2011)

Examples of the widespread nano-sunscreen concerns & distribution of the Safe Sunscreen Guide

23. Polling around public knowledge and usage of nano-sunscreens by Department of Innovation (DIIRTE), January-February 2012
24. Polling of public expectations for testing and labelling of nano-sunscreens by The Australia Institute, October 2010
25. Today Tonight website following story 'Sunscreen cancer risk' (Jan 3, 2012)