



## Technical construction file (TCF)

Report reference No. STT/17T1007-PPE

Applicant: Solar Eclipse International (2472210 Ontario Inc.)

Address: 302-153 Beecroft Rd. Toronto, ON. Canada M2N 7C5

Manufacture: Solar Eclipse International (2472210 Ontario Inc.)

Address: 302-153 Beecroft Rd. Toronto, ON. Canada M2N 7C5

Product Description: Solar Eclipse Glasses

Model: SEI10010-1, SEI10010-2, SEI10010-3, SEI10010-4, SEI10010-5

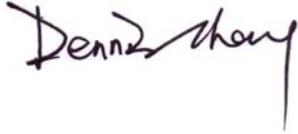
Test Type: SEI10010-5

Test Standard: 89/686/EEC

Test Date: Mar 2, 2017 – Mar 16, 2017

Issuance Date: Mar 16, 2017

Tested By:  Smish Chen- Engineer

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**Part I: Introduction**

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## Part I: Introduction

Solar Eclipse International

Solar Eclipse Glasses Instructions:

These goggles are designed for solar eclipse viewing, and they offer an excellent protection for your eyes. Do not use the eclipse glasses in daily life when driving or walking. Never observe the sun directly without the solar eclipse glasses. For your safety, do not use the product if the filters are scratched or damaged as well as in case of damaged frame. Please ask for doctors' instruction before use if having eye problems. These goggles are preventing UV400.

Read and follow the instructions printed on or packaged with the filter. Always supervise children using solar filters.

- Stand still and cover your eyes with your solar eclipse glasses before looking up at the bright Sun. After glancing at the Sun, turn away and remove your filter — do not remove it while looking at the Sun.

Material List:

Frame	paper
Filters	PET, HC

Model List:

Model	Size
SEI10010-1	40*6cm
SEI10010-2	40*12cm
SEI10010-3	40*4cm
SEI10010-4	21*29cm
SEI10010-5	40*3.7cm



## Part II: The discrepancy of products

Test model: SEI10010-5

Adding model: SEI10010-1, SEI10010-2, SEI10010-3, SEI10010-4, SEI10010-5

Difference: different size, see the model list

Photo of sample





## Part III: Check List

Note: Test case verdicts:

Pass = Pass, Fail = Fail, N.A. = Not applicable.

Clause	Requirement - test	Verdict
1	the characteristics of the product, including its composition, packaging, instructions for assembly and, where applicable, for installation and maintenance;	Pass
2	the effect on other products, where it is reasonably foreseeable that it will be used with other products;	Pass
3	the presentation of the product, the labelling, any warnings and instructions for its use and disposal and any other indication or information regarding the product;	Pass
4	The categories of consumers at risk when using the product, in particular children and the elderly.	N.A.
5	Producers shall be obliged to place only safe products on the market.	Pass
6	A product shall be deemed safe, as far as the aspects covered by the relevant national legislation are concerned, when, in the absence of specific Community provisions governing the safety of the product in question, it conforms to the specific rules of national law of the Member State in whose territory the product is marketed, such rules being drawn up in conformity with the Treaty, and in particular Articles 28 and 30 thereof, and laying down the health and safety requirements which the product must satisfy in order to be marketed.	Pass
7	A product shall be presumed safe as far as the risks and risk categories covered by relevant national standards are concerned when it conforms to voluntary national standards transposing European standards, the references of which have been published by the Commission in the Official Journal of the European Communities in accordance with Article 4. The Member States shall publish the references of such national standards.	Pass
8	In circumstances other than those referred to in paragraph 2, the conformity of a product to	--



Clause	Requirement - test	Verdict
	the general safety requirement shall be assessed by taking into account the following elements in particular, where they exist:	
8.1	voluntary national standards transposing relevant European standards other than those referred to in paragraph 2;	Pass
8.2	the standards drawn up in the Member State in which the product is marketed;	Pass
8.3	Commission recommendations setting guidelines on product safety assessment;	Pass
8.4	product safety codes of good practice in force in the sector concerned;	Pass
8.5	the state of the art and technology;	Pass
8.6	reasonable consumer expectations concerning safety.	Pass
9	Conformity of a product with the criteria designed to ensure the general safety requirement, in particular the provisions mentioned in paragraphs 2 or 3, shall not bar the competent authorities of the Member States from taking appropriate measures to impose restrictions on its being placed on the market or to require its withdrawal from the market or recall where there is evidence that, despite such conformity, it is dangerous.	Pass
10	Within the limits of their respective activities, producers shall provide consumers with the relevant information to enable them to assess the risks inherent in a product throughout the normal or reasonably foreseeable period of its use, where such risks are not immediately obvious without adequate warnings, and to take precautions against those risks.	Pass
11	The presence of warnings does not exempt any person from compliance with the other requirements laid down in this Directive.	Pass
12	Within the limits of their respective activities, producers shall adopt measures commensurate with the characteristics of the products which they supply, enabling them to:	--
12.1	be informed of risks which these products might pose;	Pass
12.2	Choose to take appropriate action including, if necessary to avoid these risks, withdrawal	Pass



Clause	Requirement - test	Verdict
	from the market, adequately and effectively warning consumers or recall from consumers.	
13	The measures referred to in the third subparagraph shall include, for example:	--
13.1	an indication, by means of the product or its packaging, of the identity and details of the producer and the product reference or, where applicable, the batch of products to which it belongs, except where not to give such indication is justified and	Pass
13.2	in all cases where appropriate, the carrying out of sample testing of marketed products, investigating and, if necessary, keeping a register of complaints and keeping distributors informed of such monitoring.	Pass
14	Action such as that referred to in (b) of the third subparagraph shall be undertaken on a voluntary basis or at the request of the competent authorities in accordance with Article 8(1)(f). Recall shall take place as a last resort, where other measures would not suffice to prevent the risks involved, in instances where the producers consider it necessary or where they are obliged to do so further to a measure taken by the competent authority. It may be effected within the framework of codes of good practice on the matter in the Member State concerned, where such codes exist.	Pass
15	Distributors shall be required to act with due care to help to ensure compliance with the applicable safety requirements, in particular by not supplying products which they know or should have presumed, on the basis of the information in their possession and as professionals, do not comply with those requirements. Moreover, within the limits of their respective activities, they shall participate in monitoring the safety of products placed on the market, especially by passing on information on product risks, keeping and providing the documentation necessary for tracing the origin of products, and cooperating in the action taken by producers and competent authorities to avoid the risks. Within the limits of their respective activities they shall take measures enabling them to cooperate efficiently.	Pass
16	Where producers and distributors know or ought to know, on the basis of the information in	Pass



Clause	Requirement - test	Verdict
	their possession and as professionals, that a product that they have placed on the market poses risks to the consumer that are incompatible with the general safety requirement, they shall immediately inform the competent authorities of the Member States thereof under the conditions laid down in Annex I, giving details, in particular, of action taken to prevent risk to the consumer.	
17	The Commission shall, in accordance with the procedure referred to in Article 15(3), adapt the specific requirements relating to the obligation to provide information laid down in Annex I.	Pass
18	Producers and distributors shall, within the limits of their respective activities, cooperate with the competent authorities, at the request of the latter, on action taken to avoid the risks posed by products which they supply or have supplied. The procedures for such cooperation, including procedures for dialogue with the producers and distributors concerned on issues related to product safety, shall be established by the competent authorities.	Pass



## Part IV: Test Report

### Summary of Tests Outcomes

EN ISO 12312-2: 2015: Eye and face protection — Sunglasses and related eyewear Part 2: Filters for direct observation of the sun

The required test items and test results are summarized in the following table:

Test	Clause	Samples	Result
<b>Transmittance</b>	<b>4.1</b>		Comply
General	4.1.1	1	Comply
Uniformity of luminous transmittance	4.1.2	1	Comply
<b>Material and surface quality</b>	<b>4.2</b>	1	Comply
<b>Mounting</b>	<b>4.3</b>		Comply
General	4.3.1	1	Comply
Dimensions	4.3.2	1	Comply
Material quality	4.3.3	1	Comply



## Transmittance

Clause 4.1

### General

Clause 4.1.1

### Requirements

The transmittance requirements of filters for the direct observation of the sun are given in Table 1. Transmittance values shall be measured or calculated at the boxed centre of the filter for normal incidence, as described in ISO 12311:2013, 7.1.1, 7.1.2, 7.3.2, 7.3.3, and 7.5.

Table 1 — Transmittance requirements for filters for the direct observation of the sun

Maximum luminous transmittance ( $\tau_v$ )	0,003 2 %
Minimum luminous transmittance ( $\tau_v$ )	0,000 061 %
Maximum solar UVB transmittance ( $\tau_{SUVB}$ )	$\tau_v$
Maximum solar UVA transmittance ( $\tau_{SUVA}$ )	$\tau_v$
Maximum solar infrared transmittance ( $\tau_{SIR}$ )	3 %

Uncertainty of measurements of transmittance shall not be greater than 25 % of the measured value.

### Outcomes

The result of the test is:

Pass



## Uniformity of luminous transmittance

Clause 4.1.2

### *Requirements*

The relative difference in the luminous transmittance value between any two points of the filter shall not be greater than 10 % (relative to the higher value). This requirement shall apply within a circle 40 mm in diameter around the boxed centre or to the edge of the filter less the marginal zone 5 mm wide, whichever is greater.

### *Outcomes*

The result of the test is:

Pass



## Material and surface quality

Clause 4.2

### *Requirements*

Except in a marginal area 5 mm wide, filters shall be free from defects likely to impair vision in use, such as bubbles, scratches, inclusions, dull spots, pitting, scouring, pocking, scaling, and undulations. Metal coated filter materials shall not exhibit more than one pinhole defect not greater than 200  $\mu\text{m}$  in average diameter within any 5 mm diameter circular zone.

### *Outcomes*

The result of the test is:

Pass



## Mounting

Clause 4.3

### General

Clause 4.3.1

### *Requirements*

Filters may be made with or without a mounting. If mounted, a filter shall be held securely so that it cannot be dislodged by normal handling or by gusts of wind. Mountings may be handheld or shaped in the form of spectacles to be worn on the face in front of any corrective (spectacle or contact) lenses worn by the user.

### *Outcomes*

The result of the test is:

Pass



## Dimensions

Clause 4.3.2

## Requirements

The filter or filters and mounting assembly shall be of a size sufficient to cover both eyes of the user simultaneously and in no case shall have overall dimensions less than 115 mm in width and 35 mm in depth in the plane parallel to the facial plane. Spectacle shaped mountings may have a triangular cut-away area to accommodate the crest of the nose, not to exceed 15 mm in apical height and 35 mm width at the base and may have separate filters, one for each eye, provided that the overall dimensions are satisfied.

## Outcomes

The result of the test is:

Pass



## Material quality

Clause 4.3.3

### *Requirements*

The filter and mounting shall be free from roughness, sharp edges, projections, or other defects which could cause discomfort or injury during use. No part of the filter or mounting which is in contact with the wearer shall be made of materials which are known to cause any skin irritation.

### *Outcomes*

The result of the test is:

Pass



## Part V: Declaration of Conformity

### EC Declaration of Conformity

Council Directive 89/686/EEC on Personal Protective Equipment

We, Solar Eclipse International (2472210 Ontario Inc.)  
302-153 Beecroft Rd. Toronto, ON. Canada M2N 7C5

Certify that the product described below is in conformity with the Directive

89/686/EEC

Product Name: Solar Eclipse Glasses  
Models: SEI10010-1, SEI10010-2, SEI10010-3, SEI10010-4, SEI10010-5

The product has been assessed by the application of the following standard:

89/686/EEC

Toronto, Ontario, March 16, 2017

Issue place and date

Company stamp and Signature  
of authorized personnel