SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier
1.1.1 Commercial Product Name
ChromaFlair® Light Interference Pigment

1.1.2 Product code
Components: See also section 3
REACH registration is not applicable for mixtures. The components of the mixture will be registered latest according to the 1 to 10 tonnes deadline.

1.2 Relevant identified uses of the substance or mixture and uses advised against
1.2.1 Recommended use
Manufacture of paints, varnishes and similar coatings, printing ink and mastics.

1.3 Details of the supplier of the safety data sheet
1.3.1 Supplier
REACHLaw Ltd. (Only Representative)
Street address
Vänrikinkuja 3 JK 21
Postcode and post office
02600 Espoo
Finland
Telephone
+358(0) 9 412 3055
Telefax
+358(0) 9 412 3049
Email
SDS@reachlaw.fi, webpage: www.reachlaw.fi

1.3.3 Identification of the non-community manufacturer
Viavi Solutions
1402 Mariner Way
95407-7307 Santa Rosa
USA
Telephone: 1(707) 525-9200
Email: ospcustomerservice@viavisolutions.com

1.4 Emergency telephone number
1.4.1 Telephone number, name and address
EU-wide emergency number: 112
See section 16.6 for the list of telephone numbers of poison centers in the European Economic Area.

SECTION 2. HAZARDS IDENTIFICATION


2.1 Classification of the substance or mixture
1272/2008 (CLP)
Skin Irrit. 2, H315
Flam. Sol. 1, H228
Eye Irrit. 2, H319
STOT SE 3, H335

2.2 Label elements
1272/2008 (CLP)
GHS07 - GHS02
Signal word Danger
Hazard Statements
H315 Causes skin irritation.
H228 Flammable solid.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

**Precautionary Statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P362 Take off contaminated clothing and wash before reuse.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.

**2.3 Other hazards**

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). The PBT and vPvB criteria of Annex XIII to the regulation does not apply to inorganic substances.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2 Mixtures**

1-propoxypropan-2-ol is present as a wetting agent to reduce the generation of airborne dusts.

**Hazardous components**

<table>
<thead>
<tr>
<th>CAS/EC and Reg.number</th>
<th>EINECS</th>
<th>Chemical name of the substance</th>
<th>Concentration</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7783-40-6</td>
<td>231-995-1</td>
<td>Magnesium fluoride</td>
<td>70-85 %</td>
<td>CLP: Eye Irrit. 2; H319, Skin Irrit. 2; H315, STOT SE 3; H335</td>
</tr>
<tr>
<td>1569-01-3</td>
<td>216-372-4</td>
<td>1-propoxypropan-2-ol</td>
<td>10 %</td>
<td>CLP: Flam. Liquid 3; H226, Eye Irrit. 2; H319</td>
</tr>
<tr>
<td>7440-47-3</td>
<td>231-157-5</td>
<td>Chromium</td>
<td>1-10 %</td>
<td>Not classified</td>
</tr>
<tr>
<td>7429-90-5</td>
<td>231-072-3</td>
<td>Aluminium</td>
<td>1-10 %</td>
<td>CLP: Water-react. 2; H261, Flam. Sol. 1; H228</td>
</tr>
</tbody>
</table>

**3.3 Other information**

This product is a mixture. Health hazard information is based on its components. Physical hazards: flammable.

**SECTION 4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

**4.1.2 Inhalation**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**4.1.3 Skin contact**

Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. Consult a physician.

**4.1.4 Eye contact**

Immediately flush eye(s) with plenty of water. In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if symptoms occur.

**4.1.5 Ingestion**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

Causes eye, skin, and respiratory tract irritation. Difficulty in breathing. If coughing, difficult breathing or other symptoms of poisoning occur, even after several hours, call a physician immediately.
4.3  Indication of immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

5.1  Extinguishing media
5.1.1  Suitable extinguishing media
Dry chemical  Dry powder  Use extinguishing measures that are appropriate to local circumstances and the
surrounding environment.
5.1.2  Extinguishing media which must not be used for safety reasons
No information available.
5.2  Special hazards arising from the substance or mixture
Contact with water liberates extremely flammable gases. - Gives off hydrogen by reaction with metals.
Decomposition products - Hydrogen fluoride metal oxides. Container may explode if heated. Water in the
container will lead to increased pressure and risk of explosion. Burning produces noxious and toxic fumes.
5.3  Advice for firefighters
Wear suitable protective equipment. Wear full protective clothing and self-contained breathing apparatus.
Immediately evacuate personnel to safe areas. Do not allow run-off from fire fighting to enter drains or water
courses.
5.4  Specific methods
No information available.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1  Personal precautions, protective equipment and emergency procedures
Use personal protective equipment.  Avoid contact with skin, eyes and clothing. Evacuate personnel to safe
areas. Keep people away from and upwind of spill/leak. Keep away from sources of ignition - No smoking. Keep
away from flames and sparks. Avoid dust formation.
6.2  Environmental precautions
Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer
system. Prevent further leakage or spillage if safe to do so. Try to prevent the material from entering drains or
water courses.
6.3  Methods and materials for containment and cleaning up
Prevent further leakage or spillage if safe to do so. Sweep up and shovel into suitable containers for disposal.
Clean contaminated surface thoroughly. Pick up and arrange disposal without creating dust. Keep in suitable,
closed containers for disposal. - Caution: Water in the container will lead to increased pressure and risk of
explosion. Dispose of as hazardous waste in compliance with local and national regulations.
6.4  Reference to other sections
See also section 8.

SECTION 7. HANDLING AND STORAGE

7.1  Precautions for safe handling
Avoid dust formation.  Avoid breathing dust or vapour. Avoid contact with skin and clothing. Wear personal
protective equipment. Smoking, eating and drinking should be prohibited in the application area.
7.2  Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Keep away from open flames, hot surfaces and
sources of ignition.
7.3  Specific end use(s)
Colouring agents, pigments.
### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

Mixture Threshold limits: Values See also section 8.1.3

#### 8.1.3 Limit values in other countries

**Exposure controls / (Biological occupational exposure limits):**

**Aluminium, powder (CAS 7429-90-5):**

- Austria: STEL 20 mg/m³; MAK: 10 mg/m³
- Germany: MAK: 4 mg/m³; MAK: 1.5 mg/m³ / (200 μg/L Urine EOS)
- Denmark: TWA: 10 mg/m³, TWA: 10 mg/m³
- Finland: TWA: 2 mg/m³
- France: VME: 10 mg/m³, VME: 5 mg/m³; VME: 5 mg/m³
- Ireland: TWA: 10 mg/m³; TWA: 4 mg/m³
- Norway: TWA: 5 mg/m³
- Poland: NDS: 2.5 mg/m³; NDS: 1.2 mg/m³
- Portugal: TWA: 10 mg/m³
- Switzerland: MAK: 3 mg/m³ / (60 μg/g Creatinine Urine, no restrictions)
- United Kingdom: STEL: 30 mg/m³; STEL: 12 mg/m³; TWA: 10 mg/m³; TWA: 4 mg/m³
- Spain: VLA-ED: 10 mg/m³

**Magnesium fluoride (CAS 7783-40-6):**

- EU: TWA: 2.5 mg/m³
- Denmark: TWA: 2.5 mg/m³
- Finland: TWA: 2.5 mg/m³
- France: VME: 2.5 mg/m³ / (3 mg/g Creatinine Urine: BOS; 10 mg/g Creatinine Urine: EOS)
- Germany: MAK: 1 mg/m³
- Ireland: TWA: 2.5 mg/m³
- Italy: TWA: 2.5 mg/m³ / (3 mg/g Creatinine Urine: BOS; 10 mg/g Creatinine Urine: EOS)
- Netherlands: STEL: 2 mg/m³
- Norway: TWA: 0.5 mg/m³; STEL: 1.5 mg/m³
- Poland: NDSCh: 3 mg/m³; NDS: 1 mg/m³
- Portugal: TWA: 2.5 mg/m³
- Spain: VLA-ED: 2.5 mg/m³
- United Kingdom: TWA: 2.5 mg/m³

#### 8.1.4 DNELs

No information available.

#### 8.1.5 PNECs

No information available.

#### 8.2 Exposure controls

**8.2.1 Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**8.2.2 Individual protection measures**

**8.2.2.1 Respiratory protection**

In case of insufficient ventilation wear suitable respiratory equipment. Wear a positive-pressure supplied-air respirator.
8.2.2.2 Hand protection
Gloves must be inspected prior to use. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

8.2.2.3 Eye/face protection
Safety glasses with side-shields.

8.2.2.4 Skin protection
Long sleeved clothing.

8.2.3 Environmental exposure controls
Local authorities should be advised if significant spillages cannot be contained. Do not allow material to contaminate ground water system. Prevent product from entering drains.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important Health Safety and Environmental Information

9.1.1 Appearance
paste (wetted powder).

9.1.2 Odour
1-propoxypropan-2-ol used as a wetting agent has an ether-like odor.

9.1.3 Odour threshold
No information available.

9.1.4 pH
No information available.

9.1.5 Melting point/freezing point
No information available.

9.1.6 Initial boiling point and boiling range
2260 °C for pigment; 140-160 °C for 1-propoxypropan-2-ol.

9.1.7 Flash point
43.3. to 44.4 °C ASTM D93-13 closed cup (contains 1-propoxypropan-2-ol).

9.1.8 Evaporation rate
No information available.

9.1.9 Flammability (solid, gas)
Flammable

9.1.10 Explosive properties

9.1.10.1 Lower explosion limit
No information available.

9.1.10.2 Upper explosion limit
No information available.

9.1.11 Vapour pressure
No information available.

9.1.12 Vapour density
No information available.

9.1.13 Relative density
Wetted pigment: 2.41, dry pigment: 2.97.

9.1.14 Solubility(ies)

9.1.14.1 Water solubility
Insoluble

9.1.14.2 Fat solubility (solvent - oil to be specified)
No information available.

9.1.15 Partition coefficient: n-octanol/water
Not applicable. Log Pow = 0.621 @ 20 °C (pH 7) for 1-propoxypropan-2-ol.

9.1.16 Auto-ignition temperature
No data is available on the product itself. 252 °C for 1-propoxypropan-2-ol.

9.1.17 Decomposition temperature
No information available.

9.1.18 Viscosity
Not applicable.

9.1.19 Explosive properties
Not explosive

9.1.20 Oxidising properties
The substance or mixture is not classified as oxidizing.

9.2 Other information
No information available.

SECTION 10. STABILITY AND REACTIVITY
10.1 Reactivity
No dangerous reaction known under conditions of normal use.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid
Avoid creating dust. Heat, flames and sparks.

10.5 Incompatible materials
Strong acids and strong bases. Strong oxidizing agents.

10.6 Hazardous decomposition products
Fluorine compounds. Magnesium oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Likely route of exposure: Contact with eyes or skin causes irritation. This product is a mixture. Health hazard information is based on its components.

11.1.1 Acute toxicity
Not classified.

11.1.2 Irritation and corrosion
Causes eye and skin irritation.

11.1.3 Sensitisation
Not classified.

11.1.4 Subacute, subchronic and prolonged toxicity
Not classified.

11.1.5 STOT-single exposure
This product is classified as STOT SE 3.

11.1.6 STOT-repeated exposure
Not classified.

11.1.7 Aspiration hazard
Not classified.

11.1.8 Other information on acute toxicity
No information available.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

12.1.1 Aquatic toxicity
Not classified. Environmentally hazardous. Aquatic toxicity is unlikely due to low solubility.

12.1.2 Toxicity to other organisms
No information available.

12.2 Persistence and degradability

12.2.1 Biodegradation
The methods for determining biodegradability are not applicable to inorganic substances.

12.2.2 Chemical degradation
Not applicable.

12.3 Bioaccumulative potential
No information available.
12.4 Mobility in soil
Adsorbs on soil.

12.5 Results of PBT and vPvB assessment
This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects
No information available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Dispose of as hazardous waste in compliance with local and national regulations. Contaminated packaging should be emptied as far as possible. Handle in accordance with good industrial hygiene and safety practice. Dispose of product residue in accordance with the instructions of the person responsible for waste disposal. Waste must be classified and labelled prior to recycling or disposal. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

14.1 UN number
3175

14.2 UN proper shipping name
SOLID CONTAINING FLAMMABLE LIQUIDS, N.O.S. (Contains 1-propoxypropan-2-ol, Aluminium)

14.3 Transport hazard class(es)
4.1

14.4 Packing group
II

14.5 Environmental hazards
Not classified.

14.6 Special precautions for users
No information available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
No information available.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
EU Regulation (EC) No. 1907/2006 (REACH)
Annex XIV - List of substances subject to authorisation, Substances of very high concern: N/A
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles: N/A

15.2 Chemical safety assessment
Not applicable. A Chemical Safety Assessment is not required for this product.

SECTION 16. OTHER INFORMATION

16.1 Additions, Deletions, Revisions
Version 3.0

16.2 Key or legend to abbreviations and acronyms
16.3 **Key literature references and sources for data**
Material Safety Data Sheet ChromaFlair® Light Interference Pigment Version 14-06-2012

16.4 **Classification procedure**
Classification according to Regulation (EU) 1272/2008 with the correlation table 67/548/EEC or 1999/45/EC (Annex VII of CLP)

16.5 **List of relevant R phrases, hazard statements, safety phrases and/or precautionary statements**

- **H226** Flammable liquid and vapour.
- **H261** In contact with water releases flammable gases.

16.6 **Emergency telephone number**
Europe-wide emergency number: 112

**Contact a poison control centre. List of Telephone Numbers:**

- Austria (Vienna Wien) +43 1 406 43 43; Belgium (Brussels Bruxelles) +32 70 245 245; Bulgaria (Sofia) +359 2 9154 409; Czech Republic (Prague Praha) +420 224 919 293; Denmark (Copenhagen) 82 12 12 12; Estonia (Tallinn) 112; Finland (Helsinki) +358 9 471 977; France (Paris) +33 1 40 0548 48; Germany (Berlin) +49 30 19240; Greece (Athens Athinai) +30 10 779 3777; Hungary (Budapest) 06 80 20 11 99; Iceland (Reykjavik) +354 525 111, +354 543 2222; Ireland (Dublin) +353 1 8379964; Italy (Rome) +39 06 305 4343; Latvia (Riga) +371 704 2468; Lithuania (Vilnius) +370 5 236 20 52 or +370 687 53378; Malta (Valletta) 2425 0000; Netherlands (Bilthoven) +31 30 274 88 88; Norway (Oslo) 22 591300; Poland (Gdansk) +48 58301 65 16 or +48 58 349 2831; Portugal (Lisbon Lisboa) 808 250 143; Romania (Bucharest) +40 21 3183606; Slovakia (Bratislava) +421 2 54 77 4166; Slovenia (Ljubljana) + 386 41 650 500; Spain (Barcelona) +34 93 227 98 33 or +34 93 227 54 00 bleep 190; Sweden (Stockholm) 112 or +46 8 33 12 31 (mon-fri 9.00-17.00); United Kingdom (London) 112 or 0845 4647 (NHS Direct).