

**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

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008. Hazardous. Causes eye and skin irritation. Highly flammable.

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

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

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

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- 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.

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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

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- EWC - European Waste Catalogue
- MAK - Maximale Arbeitsplatzkonzentrationen (Germany): maximum concentration of a chemical substance in the workplace, expressed as daily 8-hour time-weighted average values and apply to healthy adults.
- OEL - Occupational exposure limit
- OSHA - Occupational Safety and Health Administration (USA)
- PBT/vPvB - Persistent, bioaccumulative and toxic/ very persistent and very bioaccumulative
- PEL - Permissible exposure limit
- STEL - Short term exposure limit
- STOT SE - Specific Target Organ Toxicity, Single Exposure

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).