

## 39-10 LM Reflex Blue 6400

Version 4.0

Revision Date 27.07.2017

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Product name : 39-10 LM Reflex Blue 6400  
Material : 81-110889-3.2730

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Printing inks, varnishes and printing ink related material for professional users.

#### 1.3 Details of the supplier of the safety data sheet

Company : Siegwerk Druckfarben AG & Co. KGaA  
Alfred-Keller-Straße 55  
53721 Siegburg  
Telephone : +4922413040  
Telefax : +492241304777  
E-mail address of person responsible for the SDS : msds\_info@siegwerk.com

#### 1.4 Emergency telephone number

+44 1235 239670 National Chemical Emergency Centre (NCEC)

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Chronic aquatic toxicity, Category 2	H411: Toxic to aquatic life with long lasting effects.

#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H315 Causes skin irritation.

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H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements :

### Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ eye protection/ face protection.

### Response:

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Radiation curable printing ink

#### Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
Pentaerythritol, ethoxylated, esters with acrylic acid	51728-26-8 500-111-9 01-2119969962-19	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Aquatic Chronic 2; H411	>= 30 - < 50
Ethoxylated trimethylolpropane triacrylate (TMPeOTA)	28961-43-5 500-066-5 01-2119489900-30	Eye Irrit. 2; H319 Skin Sens. 1; H317	>= 10 - < 20
2-Benzyl-2-dimethylamino-4-morpholinobutyrophenone	119313-12-1 404-360-3 01-0000015394-70	Repr. 2; H361d Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 2,5 - < 3
Phenylbis(2,4,6-trimethylbenzoyl)phosphine oxide	162881-26-7 423-340-5 01-2119489401-38	Skin Sens. 1; H317 Aquatic Chronic 4; H413	>= 0,25 - < 1
Trimethylolpropane triacrylate	15625-89-5 239-701-3 01-2119489896-11	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317	>= 0,1 - < 1

For explanation of abbreviations see section 16.

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### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- General advice : Victim to lie down in the recovery position, cover and keep him warm.  
Never give anything by mouth to an unconscious person.  
When symptoms persist or in all cases of doubt seek medical advice.  
Show this safety data sheet to the doctor in attendance.
- If inhaled : Move to fresh air.  
Keep patient warm and at rest.  
If breathing is irregular or stopped, administer artificial respiration.
- In case of skin contact : Take off all contaminated clothing immediately.  
Wash skin thoroughly with soap and water or use recognized skin cleanser.  
Do NOT use solvents or thinners.
- In case of eye contact : Remove contact lenses.  
Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.  
Seek medical advice.
- If swallowed : If accidentally swallowed obtain immediate medical attention.  
Keep at rest.  
Rinse mouth with water.  
Do NOT induce vomiting.

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

- Symptoms : No information available.
- Risks : No information available.

#### 4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : No information available.

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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Unsuitable extinguishing media : High volume water jet

#### 5.2 Special hazards arising from the substance or mixture

- Hazardous combustion products : No hazardous combustion products are known

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### 5.3 Advice for firefighters

- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.
- Further information : Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- Personal precautions : Use personal protective equipment. Ventilate the area. Evacuate personnel to safe areas.

### 6.2 Environmental precautions

- Environmental precautions : Do not let product enter drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

### 6.3 Methods and material for containment and cleaning up

- Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Clean with detergents. Avoid solvents.

### 6.4 Reference to other sections

For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Advice on safe handling : Avoid exceeding the given occupational exposure limits (see section 8). For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapour or mist.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection. Take measures to prevent the build up of electrostatic charge.
- Hygiene measures : Store personal protection equipment in a clean location away from the work area. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wash hands before breaks and at the end of workday. Keep away from food and drink.

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### 7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep containers tightly closed in a dry, cool and well-ventilated place. Observe label precautions. No smoking. Prevent unauthorized access.
- Advice on common storage : Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

### 7.3 Specific end use(s)

- Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Engineering measures

Maintain air concentrations below occupational exposure standards.

#### Personal protective equipment

Eye protection : Chemical resistant goggles must be worn.

#### Hand protection

Material : Nitrile rubber  
Break through time : > 10 min  
Glove thickness : > 0,12 003

Material : Nitrile rubber  
Break through time : > 240 min  
Glove thickness : > 0,45 003

Remarks : The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. As the product is a mixture of several substances, the durability of the glove materials cannot be calculated in advance and has to be tested before use. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Barrier creams may help to protect the exposed areas of skin, they should however not be applied once exposure has occurred. Gloves should be discarded and replaced if there is any indication of degradation or

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chemical breakthrough.

Skin and body protection : Working clothes must not consist of textiles, which show a dangerous melting behaviour in case of fire.  
Skin should be washed after contact.  
Antistatic boots

Protective measures : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

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### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : coloured

Odour : characteristic

Odour Threshold : not determined

pH : not determined

Melting point/range : Not applicable

Boiling point : > 38 °C

Flash point : does not flash

Evaporation rate : not determined

Upper explosion limit : not determined

Lower explosion limit : not determined

Vapour pressure : < 1.100 hPa (50 °C)

Relative vapour density : not determined

Density : ca. 1,16 g/cm<sup>3</sup> (20 °C)

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : not determined

Decomposition temperature : The substance or mixture is not classified self-reactive.

Viscosity  
Viscosity, kinematic : > 21 mm<sup>2</sup>/s (40 °C)

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

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### 9.2 Other information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Stable under recommended storage conditions.

### 10.2 Chemical stability

No decomposition if stored and applied as directed.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : None known.

### 10.4 Conditions to avoid

Conditions to avoid : Protect from frost, heat and sunlight.

### 10.5 Incompatible materials

Materials to avoid : Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

### 10.6 Hazardous decomposition products

Stable under recommended storage conditions.

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## SECTION 11: Toxicological information

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the Regulation (EC) No. 1272/2008 and classified for toxicological hazards accordingly. See Sections 2 and 3 for details.

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Product:

Acute dermal toxicity : Remarks: This information is not available.

#### Skin corrosion/irritation

##### Product:

Remarks: This information is not available.

##### Components:

#### || Pentaerythritol, ethoxylated, esters with acrylic acid:

Species: reconstructed human epidermis (RhE)

Method: OECD Test Guideline 439

Result: Skin irritation

GLP: yes

#### || Trimethylolpropane triacrylate:

Result: Skin irritation

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### Serious eye damage/eye irritation

**Product:**

Remarks: This information is not available.

**Components:**

|| **Pentaerythritol, ethoxylated, esters with acrylic acid:**

Species: Rabbit

Method: OECD Test Guideline 405

Result: Irritation to eyes, reversing after 7 to 21 days

GLP: yes

|| **Ethoxylated trimethylolpropane triacrylate (TMPeoTA):**

Method: OECD Test Guideline 405

Result: Eye irritation

|| **Trimethylolpropane triacrylate:**

Result: Eye irritation

### Respiratory or skin sensitisation

**Product:**

Remarks: This information is not available.

**Components:**

|| **Ethoxylated trimethylolpropane triacrylate (TMPeoTA):**

Test Type: Buehler Test

Exposure routes: Dermal

Species: Guinea pig

Result: May cause sensitisation by skin contact.

|| **Trimethylolpropane triacrylate:**

Result: May cause sensitisation by skin contact.

### Germ cell mutagenicity

**Product:**

Genotoxicity in vitro : Remarks: Not classified due to lack of data.

### Carcinogenicity

**Product:**

Carcinogenicity - Assessment : Carcinogenicity classification not possible from current data.

### Reproductive toxicity

**Product:**

Reproductive toxicity - : Fertility classification not possible from current data.



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Assessment

### STOT - single exposure

**Product:**

Remarks: No data available

### STOT - repeated exposure

**Product:**

Remarks: No data available

### Aspiration toxicity

**Product:**

No aspiration toxicity classification

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## SECTION 12: Ecological information

Unless otherwise indicated, no data is available on the mixture itself. The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and classified for ecotoxicological hazards accordingly.

### 12.1 Toxicity

**Product:**

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae : Remarks: No data available

Toxicity to bacteria :  
Remarks: No data available

**Components:**

**Pentaerythritol, ethoxylated, esters with acrylic acid:**

Toxicity to fish : LC50 (Brachydanio rerio): 1,76 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 90,94 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

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### **2-Benzyl-2-dimethylamino-4-morpholinobutyrophenone:**

- Toxicity to fish : LC50 (Brachydanio rerio): 0,46 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0,8 mg/l  
Exposure time: 24 h  
Method: OECD Test Guideline 202
- Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): > 2 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

### 12.2 Persistence and degradability

#### **Product:**

- Biodegradability : Remarks: No data available

### 12.3 Bioaccumulative potential

#### **Product:**

- Bioaccumulation : Remarks: Does not bioaccumulate.

### 12.4 Mobility in soil

#### **Product:**

- Mobility : Remarks: Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

### 12.5 Results of PBT and vPvB assessment

#### **Product:**

- Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

### 12.6 Other adverse effects

#### **Product:**

- Additional ecological information : We have no quantitative data concerning the ecological effects of this product.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

- Product : The product should not be allowed to enter drains, water courses or the soil.  
Dispose of in accordance with local regulations.
- Contaminated packaging : Packaging that is not properly emptied must be disposed of as the unused product.

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Empty containers can be landfilled after cleaning, when in compliance with local regulations.

Waste Code : 080312, waste ink containing dangerous substances

### SECTION 14: Transport information

#### 14.1 UN number

**ADN** : UN 3082  
**ADR** : UN 3082  
**IMDG** : UN 3082  
**IATA** : UN 3082

#### 14.2 UN proper shipping name

**ADN** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(2-Benzyl-2-dimethylamino-4-morpholinobutyrophenone (ketone based photoinitiator), Pentaerythritol, ethoxylated (acrylic acid ester))

**ADR** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(2-Benzyl-2-dimethylamino-4-morpholinobutyrophenone (ketone based photoinitiator), Pentaerythritol, ethoxylated (acrylic acid ester))

**IMDG** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(2-Benzyl-2-dimethylamino-4-morpholinobutyrophenone (ketone based photoinitiator), Pentaerythritol, ethoxylated (acrylic acid ester))

**IATA** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., Environmentally hazardous substance, liquid, n.o.s.  
(2-Benzyl-2-dimethylamino-4-morpholinobutyrophenone (ketone based photoinitiator), Pentaerythritol, ethoxylated (acrylic acid ester))

#### 14.3 Transport hazard class(es)

**ADN** : 9  
**ADR** : 9  
**IMDG** : 9  
**IATA** : 9

#### 14.4 Packing group

**ADN**  
Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9

**ADR**  
Packing group : III

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Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9  
Tunnel restriction code : (E)

### IMDG

Packing group : III  
Labels : 9  
EmS Code : F-A, S-F

### IATA (Cargo)

Packing instruction (cargo aircraft) : 964  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous Dangerous Goods

### IATA (Passenger)

Packing instruction (passenger aircraft) : 964  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous Dangerous Goods

## 14.5 Environmental hazards

### ADN

Environmentally hazardous : yes

### ADR

Environmentally hazardous : yes

### IMDG

Marine pollutant : yes

### IATA (Passenger)

Marine pollutant : yes

### IATA (Cargo)

Marine pollutant : yes

## 14.6 Special precautions for user

Remarks : Packages less than or equal to 5 L / 5 kg: Not classified as dangerous in the meaning of transport regulations (SP375 ADR, 2.10.2.7 IMDG Code, A197 IATA DGR).

## 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : This product does not contain substances of very high concern (Regulation (EC) No

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Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	1907/2006 (REACH), Article 57). Not applicable	
Regulation (EC) No 850/2004 on persistent organic pollutants	:	Not applicable	
Seveso II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances			
9b	Dangerous for the environment	Quantity 1 200 t	Quantity 2 500 t
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.			
E2	ENVIRONMENTAL HAZARDS	200 t	500 t
Volatile organic compounds	:	Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 0,02 % Remarks: VOC content excluding water	
Other regulations	:	Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.  Young people under the age of 18 are not allowed to use or be exposed to the product professionally. Young people who will be turning 16 during the calendar year are, however, except from this rule if the product is a necessary part of their education.	

### 15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

## SECTION 16: Other information

### Full text of H-Statements

H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H361d	:	Suspected of damaging the unborn child.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.
H413	:	May cause long lasting harmful effects to aquatic life.

### Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the

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specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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