

**\*\*\*Section 1 - IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING\*\*\*****1.1 Product Identifier:****Material Name:** OBJET TANGOBLACK FLX973**Chemical Family**

acrylic compounds

**Substance Registration Number(s)**

The components are either pre-registered or not subject to REACH.

**1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against Identified Uses**

This product is a cartridge containing ink. Under normal conditions of use, the substance is released from a cartridge only inside an appropriate printing system, and therefore, exposure is limited.

**Uses Advised Against**

None known.

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

Stratasys GmbH  
Airport Boulevard B 210  
D-77836 Rheinmünster, Germany

Phone: +49 722 97 77 20

Emergency # +49 722 97772280

**Email Address**

objet-info@stratasys.com; www.stratasys.com

**1.4 Emergency Telephone Number**

+49 722 97772280 : Europe (Multi-lingual Response)  
+49 722 97772281 : Global (English language response)  
+1 978 495 5580 : USA (Multi-lingual Response)  
+85 2 975 70887 : Asia Pacific (Multi-lingual Response)  
+61 2 8011 4763 : Australia (Multi-lingual Response)  
+86 15626070595 : China (Chinese language response)

**\*\*\*Section 2 - HAZARDS IDENTIFICATION\*\*\*****2.1 Classification of the Substance or Mixture****Classification according to Regulation (EC) No 1272/2008**

Skin Corrosion / Irritation, Category 2  
Eye Damage / Irritation, Category 2  
Skin sensitizer, Category 1  
Toxic to Reproduction, Category 2  
Specific Target Organ Toxicity - Single Exposure, Category 3 (respiratory system)  
Hazardous to the Aquatic Environment - Chronic Hazard, Category 3

**Classification according to Directives 67/548/EEC and/or 1999/45/EC**

**R36/37/38** Irritating to eyes, respiratory system and skin.  
**R52/53** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
**R62** Possible risk of impaired fertility.

**2.2 Label Elements**

Labeling according to Regulation (EC) 1272/2008/EC:

Symbol(s)

**Signal Word**

WARNING

**Hazard Statement(s)****H315** Causes skin irritation.**H319** Causes serious eye irritation.**H317** May cause an allergic skin reaction**H335** May cause respiratory irritation.**H361** Suspected of damaging fertility or the unborn child.**H412** Harmful to aquatic life with long lasting effects.**Precautionary Statement(s)****Prevention****P280** Wear protective gloves/protective clothing/eye protection/face protection.**Response****P302+P352** IF ON SKIN: Wash with plenty of soap and water. **P333+P313** If skin irritation or rash occurs: Get medical advice/attention. **P363** Wash contaminated clothing before reuse. **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.**Storage**

None needed according to classification criteria.

**Disposal****P501** Dispose of contents/container in accordance with local/regional/national/international regulations.**Labeling according to Directive 67/548/EEC and/or 1999/45/EC****Symbols****Xi****R36/37/38** Irritating to eyes, respiratory system and skin.**R52/53** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.**R62** Possible risk of impaired fertility.**S2** Keep out of the reach of children.**S24** Avoid contact with skin.

**S26** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**S36** Wear suitable protective clothing.

**S37** Wear suitable gloves.

**S46** If swallowed, seek medical advice immediately and show this container or label.

**S60** This material and its container must be disposed of as hazardous waste.

**S61** Avoid release to the environment. Refer to special instructions/Safety data sheets.

## 2.3 Other Hazards

Contains traces of a (possible) fertility impairing substance.

### \* \* \*Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS\* \* \*

CAS EC No Registration No	Component Synonyms	67/548 EEC (DSD)	1272/2008 (CLP)	Percent
--	Acrylic oligomer	Xi; R:36/38	Skin Irrit. 2 Eye Irrit. 2	<30
5888-33-5 227-561-6 --	2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-	Xi N; R:36/37/38-51/53	Skin Irrit. 2 Eye Irrit. 2 STOT SE 3 Aquatic Chronic 2	<25
-- --	Photo initiator	Xn; R:62	Repr. 2	<2
1330-20-7 215-535-7 --	Xylenes (o-, m-, p- isomers)	Xn; R:10-20/21-38	Flam. Liq. 3 Acute Tox. 4 (Dermal) Acute Inh. Tox. 4 Skin Irrit. 2 Note(s): C	0.1-1
100-51-6 202-859-9 --	Benzyl alcohol	Xn; R:20/22	Acute Tox. 4 (Oral) Acute Inh. Tox. 4	<0.5
52408-84-1 500-114-5 --	Acrylic acid ester	Xi; R:36-43	Eye Irrit. 2 Skin Sens. 1	<0.3
123-86-4 204-658-1 --	n-Butyl acetate	R:10-66-67	Flam. Liq. 3 STOT SE 3 EU Repeat Skin EU	<0.1
106-24-1 203-377-1 --	Geraniol	Xi; R:38-41-43	Skin Irrit. 2 Eye Dam. 1 Skin Sens. 1	<0.01

123-92-2 204-662-3 --	Isoamyl acetate	R:10-66	Flam. Liq. 3 EU Repeat Skin EU Note(s): C	<0.01
128-37-0 204-881-4 --	2,6-Di-tert-butyl-p-cresol	N; R:50/53	Aquatic Chronic 1	<0.01
138-86-3 205-341-0 --	Dipentene	Xi N; R:10-38-43- 50/53	Flam. Liq. 3 Skin Irrit. 2 Skin Sens. 1 Aquatic Acute 1 Aquatic Chronic 1 Note(s): C	<0.1
100-41-4 202-849-4 --	Ethylbenzene	F Xn; R:11-20	Flam. Liq. 2 Acute Inh. Tox. 4	<0.1
5392-40-5 226-394-6 --	Citral	Xi; R:36/38-43	Skin Irrit. 2 Eye Irrit. 2 Skin Sens. 1	<0.01
1333-86-4 215-609-9 --	Carbon black			<0.1
108-65-6 203-603-9 --	Propylene glycol monomethyl ether acetate	R:10	Flam. Liq. 3	<0.1

**Notes: C** Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

#### Additional Information

Under normal conditions of use, the substance is released from a cartridge only inside an appropriate printing system, and therefore, exposure is limited. The liquid within the cartridges is considered hazardous, and the MSDS has been prepared in case of exposure to the liquid.

### \* \* \*Section 4 - FIRST AID MEASURES\* \* \*

#### 4.1 Description of First Aid Measures

##### Inhalation

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

##### Skin

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

##### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Ingestion**

If swallowed, get medical attention.

**4.2 Most Important Symptoms and Effects, both Acute and Delayed****Acute**

respiratory tract irritation, skin irritation, eye irritation, allergic skin reaction

**Delayed**

allergic skin reaction, reproductive effects

**4.3 Indication of any Immediate Medical Attention and Special Treatment Needed****Note to Physicians**

IF exposed or concerned: Get medical advice/attention.

**\*\*\*Section 5 - FIRE FIGHTING MEASURES\*\*\*****5.1 Extinguishing Media**

Use extinguishing agents appropriate for surrounding fire. Class B fires: Use carbon dioxide (CO<sub>2</sub>), regular dry chemical (sodium bicarbonate), regular form (Aqueous Film Forming Foam-AFFF), or water spray to cool containers.

**Unsuitable Extinguishing Media**

None known.

**5.2 Special Hazards Arising from the Substance or Mixture**

Slight fire hazard.

**Thermal Decomposition Products**

**Combustion:** oxides of carbon, oxides of nitrogen, oxides of phosphorus

**5.3 Advice for Firefighters****Fire Fighting Measures**

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Keep unnecessary people away, isolate hazard area and deny entry. Keep out of water supplies and sewers. Avoid inhalation of material or combustion by-products.

**Protective Equipment and Precautions for Firefighters**

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure. Avoid inhalation of material or combustion by-products.

**\*\*\*Section 6 - ACCIDENTAL RELEASE MEASURES\*\*\*****Occupational Spill / Release**

Intact cartridges do not pose a leak or spill hazard. Damaged cartridges may leak uncured ink. Stop leak if possible without personal risk. Reduce vapors with water spray. Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers.

**6.1 Personal Precautions, Protective Equipment and Emergency Procedures**

Wear personal protective clothing and equipment, see Section 8.

**6.2 Environmental Precautions**

Avoid release to the environment.

**6.3 Methods and Material for Containment and Cleaning up**

Collect spilled material with an inert absorbent such as sand or vermiculite. Place in properly labeled closed container. Flush area with water to remove trace residue.

**6.4 Reference to Other Sections**

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. See Section 13 for Disposal Considerations.

**\*\*\*Section 7 - HANDLING AND STORAGE\*\*\*****7.1 Precautions for Safe Handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing vapor or mist. Wear protective gloves/clothing and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Wash thoroughly after handling.

**7.2 Conditions for Safe Storage, Including any Incompatibilities**

Store in accordance with all current regulations and standards. Store between 15 °C and 25 °C. Shipment temperature (up to 5 weeks) is -20 °C to 50 °C. Store in a combustible storage area away from heat and open flame. Store in a cool, dry place. Avoid direct sunlight. Keep in the dark. Keep separated from incompatible substances.

**\*\*\*Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION\*\*\*****8.1 Control Parameters****Component Exposure Limits****Xylenes (o-, m-, p- isomers) (1330-20-7)**

<b>EU (IOELV):</b>	50 ppm TWA (pure); 221 mg/m <sup>3</sup> TWA (pure) 100 ppm STEL (pure); 442 mg/m <sup>3</sup> STEL (pure) Possibility of significant uptake through the skin
<b>Austria:</b>	50 ppm TWA; 221 mg/m <sup>3</sup> TWA (all isomers) 100 ppm STEL (all isomers, 4 X 15 min); 442 mg/m <sup>3</sup> STEL (all isomers, 4 X 15 min) skin notation
<b>Belgium:</b>	50 ppm TWA; 221 mg/m <sup>3</sup> TWA 100 ppm STEL; 442 mg/m <sup>3</sup> STEL Skin
<b>Bulgaria:</b>	Skin notation (pure) 442.0 mg/m <sup>3</sup> STEL (pure); 100 ppm STEL 221.0 mg/m <sup>3</sup> TWA (pure); 50 ppm TWA
<b>Czech Republic:</b>	400 mg/m <sup>3</sup> Ceiling Potential for cutaneous absorption
<b>Cyprus:</b>	Skin-potential for cutaneous absorption 100 ppm STEL; 442 mg/m <sup>3</sup> STEL 50 ppm TWA; 221 mg/m <sup>3</sup> TWA
<b>Denmark:</b>	Present Potential for cutaneous absorption 25 ppm TWA; 109 mg/m <sup>3</sup> TWA
<b>Estonia:</b>	Skin notation 100 ppm STEL; 450 mg/m <sup>3</sup> STEL 50 ppm TWA; 221 mg/m <sup>3</sup> TWA
<b>Finland:</b>	50 ppm TWA; 220 mg/m <sup>3</sup> TWA 100 ppm STEL; 440 mg/m <sup>3</sup> STEL Potential for cutaneous absorption
<b>France:</b>	50 ppm TWA (restrictive limit); 221 mg/m <sup>3</sup> TWA (restrictive limit) 100 ppm STEL [VLCT] (restrictive limit); 442 mg/m <sup>3</sup> STEL [VLCT] (restrictive limit) Risk of cutaneous absorption
<b>Germany (TRGS):</b>	100 ppm TWA AGW (all isomers, exposure factor 2); 440 mg/m <sup>3</sup> TWA AGW (all isomers, exposure factor 2) skin notation (all isomers)
<b>Germany (DFG):</b>	100 ppm TWA MAK (all isomers); 440 mg/m <sup>3</sup> TWA MAK (all isomers) 200 ppm Peak (all isomers); 880 mg/m <sup>3</sup> Peak (all isomers) skin notation (all isomers)
<b>Gibraltar:</b>	Skin notation 100 ppm STEL (pure); 442 mg/m <sup>3</sup> STEL (pure) 50 ppm TWA (pure); 221 mg/m <sup>3</sup> TWA (pure)
<b>Greece:</b>	100 ppm TWA; 435 mg/m <sup>3</sup> TWA 150 ppm STEL; 650 mg/m <sup>3</sup> STEL skin - potential for cutaneous absorption
<b>Hungary:</b>	potential for cutaneous absorption 442 mg/m <sup>3</sup> STEL [CK] 221 mg/m <sup>3</sup> TWA [AK]

<b>Ireland:</b>	50 ppm TWA; 221 mg/m <sup>3</sup> TWA 100 ppm STEL; 442 mg/m <sup>3</sup> STEL Potential for cutaneous absorption
<b>Italy:</b>	50 ppm TWA (pure); 221 mg/m <sup>3</sup> TWA (pure) 100 ppm STEL (pure); 442 mg/m <sup>3</sup> STEL (pure) skin - potential for cutaneous absorption (pure)
<b>Latvia:</b>	skin - potential for cutaneous exposure 100 ppm STEL; 442 mg/m <sup>3</sup> STEL 50 ppm TWA; 221 mg/m <sup>3</sup> TWA
<b>Lithuania:</b>	Skin notation 100 ppm STEL; 450 mg/m <sup>3</sup> STEL 50 ppm TWA; 200 mg/m <sup>3</sup> TWA
<b>Luxembourg:</b>	100 ppm STEL; 442 mg/m <sup>3</sup> STEL 50 ppm TWA; 221 mg/m <sup>3</sup> TWA
<b>Malta:</b>	possibility of significant uptake through the skin (pure) 100 ppm STEL (pure); 442 mg/m <sup>3</sup> STEL (pure) 50 ppm TWA (pure); 221 mg/m <sup>3</sup> TWA (pure)
<b>Netherlands:</b>	210 mg/m <sup>3</sup> TWA 442 mg/m <sup>3</sup> STEL skin notation
<b>Poland:</b>	Irritant Skin notation 100 mg/m <sup>3</sup> TWA
<b>Portugal:</b>	100 ppm TWA [VLE-MP] 150 ppm STEL [VLE-CD]
<b>Romania:</b>	3 g/L Medium: urine Time: end of shift Parameter: Methylhippuric acid Skin notation 100 ppm STEL; 442 mg/m <sup>3</sup> STEL 50 ppm TWA; 221 mg/m <sup>3</sup> TWA
<b>Slovak Republic:</b>	442 mg/m <sup>3</sup> Ceiling Potential for cutaneous absorption 50 ppm TWA; 221 mg/m <sup>3</sup> TWA
<b>Slovenia:</b>	Potential for cutaneous absorption 100 ppm STEL; 442 mg/m <sup>3</sup> STEL 50 ppm TWA; 221 mg/m <sup>3</sup> TWA
<b>Spain:</b>	50 ppm TWA [VLA-ED] (indicative limit value); 221 mg/m <sup>3</sup> TWA [VLA-ED] (indicative limit value) 100 ppm STEL [VLA-EC]; 442 mg/m <sup>3</sup> STEL [VLA-EC] skin - potential for cutaneous exposure
<b>Sweden:</b>	50 ppm LLV; 221 mg/m <sup>3</sup> LLV 100 ppm STV; 442 mg/m <sup>3</sup> STV Skin notation
<b>United Kingdom:</b>	50 ppm TWA; 220 mg/m <sup>3</sup> TWA 100 ppm STEL; 441 mg/m <sup>3</sup> STEL Potential for cutaneous absorption 100 ppm TWA 150 ppm STEL

**Benzyl alcohol (100-51-6)**



**Bulgaria:** 5.0 mg/m<sup>3</sup> TWA  
**Czech Republic:** 80 mg/m<sup>3</sup> Ceiling  
**Finland:** 10 ppm TWA; 45 mg/m<sup>3</sup> TWA  
**Latvia:** 5 mg/m<sup>3</sup> TWA  
**Lithuania:** Skin notation  
5 mg/m<sup>3</sup> TWA  
**Poland:** 240 mg/m<sup>3</sup> TWA

**2,6-Di-tert-butyl-p-cresol (128-37-0)**

**Austria:** 10 mg/m<sup>3</sup> TWA  
**Belgium:** 2 mg/m<sup>3</sup> TWA (aerosol and vapor)  
**Bulgaria:** 50.0 mg/m<sup>3</sup> STEL  
10.0 mg/m<sup>3</sup> TWA  
**Denmark:** 10 mg/m<sup>3</sup> TWA  
**Finland:** 10 mg/m<sup>3</sup> TWA  
20 mg/m<sup>3</sup> STEL  
**France:** 10 mg/m<sup>3</sup> TWA  
**Germany (TRGS):** 10 mg/m<sup>3</sup> TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, inhalable fraction, exposure factor 4)  
**Germany (DFG):** 10 mg/m<sup>3</sup> TWA MAK (inhalable fraction)  
40 mg/m<sup>3</sup> Peak (inhalable fraction)  
**Greece:** 10 mg/m<sup>3</sup> TWA  
**Ireland:** 10 mg/m<sup>3</sup> TWA  
**Portugal:** 2 mg/m<sup>3</sup> TWA [VLE-MP] (inhalable fraction, aerosol and vapor)  
**Slovenia:** 10 mg/m<sup>3</sup> TWA (inhalable fraction)  
**United Kingdom:** 10 mg/m<sup>3</sup> TWA  
30 mg/m<sup>3</sup> STEL (calculated)  
2 mg/m<sup>3</sup> TWA (inhalable fraction and vapor)

**Ethylbenzene (100-41-4)**

**EU (IOELV):** 100 ppm TWA; 442 mg/m<sup>3</sup> TWA  
200 ppm STEL; 884 mg/m<sup>3</sup> STEL  
Possibility of significant uptake through the skin  
**Austria:** 100 ppm TWA; 440 mg/m<sup>3</sup> TWA  
200 ppm STEL (8 X 5 min); 880 mg/m<sup>3</sup> STEL (8 X 5 min)  
skin notation  
**Belgium:** 100 ppm TWA; 442 mg/m<sup>3</sup> TWA  
125 ppm STEL; 551 mg/m<sup>3</sup> STEL  
Skin  
**Bulgaria:** Skin notation  
545.0 mg/m<sup>3</sup> STEL  
435.0 mg/m<sup>3</sup> TWA  
**Czech Republic:** 500 mg/m<sup>3</sup> Ceiling  
Potential for cutaneous absorption  
**Cyprus:** Skin-potential for cutaneous absorption  
200 ppm STEL; 884 mg/m<sup>3</sup> STEL  
100 ppm TWA; 442 mg/m<sup>3</sup> TWA  
**Denmark:** Present  
Present  
Potential for cutaneous absorption

<b>Estonia:</b>	50 ppm TWA; 217 mg/m <sup>3</sup> TWA Sensitizer Skin notation 200 ppm STEL; 884 mg/m <sup>3</sup> STEL
<b>Finland:</b>	100 ppm TWA; 442 mg/m <sup>3</sup> TWA 50 ppm TWA; 220 mg/m <sup>3</sup> TWA 200 ppm STEL; 880 mg/m <sup>3</sup> STEL Potential for cutaneous absorption
<b>France:</b>	20 ppm TWA (restrictive limit); 88.4 mg/m <sup>3</sup> TWA (restrictive limit) 100 ppm STEL [VLCT] (restrictive limit); 442 mg/m <sup>3</sup> STEL [VLCT] (restrictive limit) Risk of cutaneous absorption
<b>Germany (TRGS):</b>	20 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2); 88 mg/m <sup>3</sup> TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2) skin notation
<b>Germany (DFG):</b>	20 ppm TWA MAK; 88 mg/m <sup>3</sup> TWA MAK 40 ppm Peak; 176 mg/m <sup>3</sup> Peak skin notation
<b>Gibraltar:</b>	Skin notation 200 ppm STEL; 884 mg/m <sup>3</sup> STEL 100 ppm TWA; 442 mg/m <sup>3</sup> TWA
<b>Greece:</b>	100 ppm TWA; 435 mg/m <sup>3</sup> TWA 125 ppm STEL; 545 mg/m <sup>3</sup> STEL
<b>Hungary:</b>	potential for cutaneous absorption 884 mg/m <sup>3</sup> STEL [CK] 442 mg/m <sup>3</sup> TWA [AK]
<b>Ireland:</b>	100 ppm TWA; 442 mg/m <sup>3</sup> TWA 200 ppm STEL; 884 mg/m <sup>3</sup> STEL Potential for cutaneous absorption
<b>Italy:</b>	100 ppm TWA; 442 mg/m <sup>3</sup> TWA 200 ppm STEL; 884 mg/m <sup>3</sup> STEL skin - potential for cutaneous absorption
<b>Latvia:</b>	skin - potential for cutaneous exposure 200 ppm STEL; 884 mg/m <sup>3</sup> STEL 100 ppm TWA; 442 mg/m <sup>3</sup> TWA
<b>Lithuania:</b>	Skin notation 200 ppm STEL; 884 mg/m <sup>3</sup> STEL 100 ppm TWA; 442 mg/m <sup>3</sup> TWA
<b>Luxembourg:</b>	Possibility of significant uptake through the skin 200 ppm STEL; 884 mg/m <sup>3</sup> STEL 100 ppm TWA; 442 mg/m <sup>3</sup> TWA
<b>Malta:</b>	possibility of significant uptake through the skin 200 ppm STEL; 884 mg/m <sup>3</sup> STEL 100 ppm TWA; 442 mg/m <sup>3</sup> TWA
<b>Netherlands:</b>	215 mg/m <sup>3</sup> TWA 430 mg/m <sup>3</sup> STEL skin notation

<b>Poland:</b>	Skin notation 400 mg/m <sup>3</sup> STEL [NDSCh] 200 mg/m <sup>3</sup> TWA
<b>Portugal:</b>	100 ppm TWA [VLE-MP] 125 ppm STEL [VLE-CD]
<b>Romania:</b>	1.5 g/g Creatinine Medium: urine Time: end of work week Parameter: Mandelic acid Skin notation 200 ppm STEL; 884 mg/m <sup>3</sup> STEL 100 ppm TWA; 442 mg/m <sup>3</sup> TWA
<b>Slovak Republic:</b>	884 mg/m <sup>3</sup> Ceiling Potential for cutaneous absorption 100 ppm TWA; 442 mg/m <sup>3</sup> TWA
<b>Slovenia:</b>	Potential for cutaneous absorption 200 ppm STEL; 884 mg/m <sup>3</sup> STEL 100 ppm TWA; 442 mg/m <sup>3</sup> TWA
<b>Spain:</b>	100 ppm TWA [VLA-ED] (indicative limit value); 441 mg/m <sup>3</sup> TWA [VLA-ED] (indicative limit value) 200 ppm STEL [VLA-EC]; 884 mg/m <sup>3</sup> STEL [VLA-EC] skin - potential for cutaneous exposure
<b>Sweden:</b>	50 ppm LLV; 200 mg/m <sup>3</sup> LLV 100 ppm STV; 450 mg/m <sup>3</sup> STV
<b>United Kingdom:</b>	100 ppm TWA; 441 mg/m <sup>3</sup> TWA 125 ppm STEL; 552 mg/m <sup>3</sup> STEL Potential for cutaneous absorption 20 ppm TWA
<b>Carbon black (1333-86-4)</b>	
<b>Belgium:</b>	3.5 mg/m <sup>3</sup> TWA
<b>Denmark:</b>	Present 3.5 mg/m <sup>3</sup> TWA
<b>Estonia:</b>	3 mg/m <sup>3</sup> TWA (dust)
<b>Finland:</b>	3.5 mg/m <sup>3</sup> TWA 7 mg/m <sup>3</sup> STEL
<b>France:</b>	3.5 mg/m <sup>3</sup> TWA
<b>Greece:</b>	3.5 mg/m <sup>3</sup> TWA 7 mg/m <sup>3</sup> STEL
<b>Ireland:</b>	3.5 mg/m <sup>3</sup> TWA 7 mg/m <sup>3</sup> STEL
<b>Poland:</b>	4.0 mg/m <sup>3</sup> TWA (total inhalable dust)
<b>Portugal:</b>	3.5 mg/m <sup>3</sup> TWA [VLE-MP]
<b>Slovak Republic:</b>	2 mg/m <sup>3</sup> TWA (respirable fraction, 5% or less fibrogenic component); 10 mg/m <sup>3</sup> TWA (respirable fraction, greater than 5% fibrogenic component); 10 mg/m <sup>3</sup> TWA (total aerosol)
<b>Spain:</b>	3.5 mg/m <sup>3</sup> TWA [VLA-ED]
<b>Sweden:</b>	3 mg/m <sup>3</sup> LLV (total dust)
<b>United Kingdom:</b>	3.5 mg/m <sup>3</sup> TWA 7 mg/m <sup>3</sup> STEL 3 mg/m <sup>3</sup> TWA (inhalable fraction)
<b>Dipentene (138-86-3)</b>	

**Denmark:** 75 ppm TLV  
**Estonia:** 50 ppm STEL; 300 mg/m<sup>3</sup> STEL  
25 ppm TWA; 150 mg/m<sup>3</sup> TWA

**Germany (DFG):** skin sensitizer

**Lithuania:** Sensitizer  
50 ppm STEL; 300 mg/m<sup>3</sup> STEL  
25 ppm TWA; 150 mg/m<sup>3</sup> TWA

**Sweden:** 25 ppm LLV; 150 mg/m<sup>3</sup> LLV  
50 ppm STV; 300 mg/m<sup>3</sup> STV  
Sensitizer

**Geraniol (106-24-1)**

**Germany (DFG):** skin sensitizer

**Citral (5392-40-5)**

**Poland:** 54 mg/m<sup>3</sup> STEL [NDSCh]  
27 mg/m<sup>3</sup> TWA  
5 ppm TWA (inhalable fraction and vapor)  
Skin - potential significant contribution to overall exposure by the cutaneous route  
Sensitizer

**Propylene glycol monomethyl ether acetate (108-65-6)**

**EU (IOELV):** 50 ppm TWA; 275 mg/m<sup>3</sup> TWA  
100 ppm STEL; 550 mg/m<sup>3</sup> STEL  
Possibility of significant uptake through the skin

**Austria:** 50 ppm TWA; 275 mg/m<sup>3</sup> TWA  
100 ppm STEL (8 X 5 min); 550 mg/m<sup>3</sup> STEL (8 X 5 min)  
skin notation

**Belgium:** 50 ppm TWA; 275 mg/m<sup>3</sup> TWA  
100 ppm STEL; 550 mg/m<sup>3</sup> STEL  
Skin

**Bulgaria:** Skin notation  
550.0 mg/m<sup>3</sup> STEL; 100 ppm STEL  
275.0 mg/m<sup>3</sup> TWA; 50 ppm TWA

**Czech Republic:** 550 mg/m<sup>3</sup> Ceiling  
Potential for cutaneous absorption

**Cyprus:** Skin-potential for cutaneous absorption  
100 ppm STEL; 550 mg/m<sup>3</sup> STEL  
50 ppm TWA; 275 mg/m<sup>3</sup> TWA

**Denmark:** Present  
Potential for cutaneous absorption  
50 ppm TWA; 275 mg/m<sup>3</sup> TWA

**Estonia:** Sensitizer  
Skin notation  
100 ppm STEL; 550 mg/m<sup>3</sup> STEL  
50 ppm TWA; 275 mg/m<sup>3</sup> TWA

**Finland:** 50 ppm TWA; 270 mg/m<sup>3</sup> TWA  
100 ppm STEL; 550 mg/m<sup>3</sup> STEL  
Potential for cutaneous absorption

**France:** 50 ppm TWA (restrictive limit); 275 mg/m<sup>3</sup> TWA (restrictive limit)  
100 ppm STEL [VLCT] (restrictive limit); 550 mg/m<sup>3</sup> STEL [VLCT] (restrictive limit)

	Risk of cutaneous absorption
<b>Germany (TRGS):</b>	50 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 1); 270 mg/m <sup>3</sup> TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 1)
<b>Germany (DFG):</b>	50 ppm TWA MAK; 270 mg/m <sup>3</sup> TWA MAK 50 ppm Peak; 270 mg/m <sup>3</sup> Peak
<b>Gibraltar:</b>	Skin notation 100 ppm STEL; 550 mg/m <sup>3</sup> STEL 50 ppm TWA; 275 mg/m <sup>3</sup> TWA
<b>Greece:</b>	50 ppm TWA; 275 mg/m <sup>3</sup> TWA 100 ppm STEL; 550 mg/m <sup>3</sup> STEL skin - potential for cutaneous absorption
<b>Hungary:</b>	550 mg/m <sup>3</sup> STEL [CK] 275 mg/m <sup>3</sup> TWA [AK]
<b>Ireland:</b>	50 ppm TWA; 275 mg/m <sup>3</sup> TWA 100 ppm STEL; 550 mg/m <sup>3</sup> STEL Potential for cutaneous absorption
<b>Italy:</b>	50 ppm TWA; 275 mg/m <sup>3</sup> TWA 100 ppm STEL; 550 mg/m <sup>3</sup> STEL skin - potential for cutaneous absorption
<b>Latvia:</b>	skin - potential for cutaneous exposure 100 ppm STEL; 550 mg/m <sup>3</sup> STEL 50 ppm TWA; 275 mg/m <sup>3</sup> TWA
<b>Lithuania:</b>	Skin notation 75 ppm STEL; 400 mg/m <sup>3</sup> STEL 50 ppm TWA; 250 mg/m <sup>3</sup> TWA
<b>Luxembourg:</b>	Possibility of significant uptake through the skin 100 ppm STEL; 550 mg/m <sup>3</sup> STEL 50 ppm TWA; 275 mg/m <sup>3</sup> TWA
<b>Malta:</b>	possibility of significant uptake through the skin 100 ppm STEL; 550 mg/m <sup>3</sup> STEL 50 ppm TWA; 275 mg/m <sup>3</sup> TWA
<b>Netherlands:</b>	550 mg/m <sup>3</sup> TWA
<b>Poland:</b>	520 mg/m <sup>3</sup> STEL [NDSCh] 260 mg/m <sup>3</sup> TWA
<b>Romania:</b>	Skin notation 100 ppm STEL; 550 mg/m <sup>3</sup> STEL 50 ppm TWA; 275 mg/m <sup>3</sup> TWA
<b>Slovak Republic:</b>	550 mg/m <sup>3</sup> Ceiling Potential for cutaneous absorption 50 ppm TWA; 275 mg/m <sup>3</sup> TWA
<b>Slovenia:</b>	Potential for cutaneous absorption 100 ppm STEL; 550 mg/m <sup>3</sup> STEL 50 ppm TWA; 275 mg/m <sup>3</sup> TWA
<b>Spain:</b>	50 ppm TWA [VLA-ED] (indicative limit value); 275 mg/m <sup>3</sup> TWA [VLA-ED] (indicative limit value) 100 ppm STEL [VLA-EC]; 550 mg/m <sup>3</sup> STEL [VLA-EC]

skin - potential for cutaneous exposure

**Sweden:** 50 ppm LLV; 250 mg/m<sup>3</sup> LLV  
75 ppm STV; 400 mg/m<sup>3</sup> STV  
Skin notation

**United Kingdom:** 50 ppm TWA; 274 mg/m<sup>3</sup> TWA  
100 ppm STEL; 548 mg/m<sup>3</sup> STEL  
Potential for cutaneous absorption

**n-Butyl acetate (123-86-4)**

**Austria:** 100 ppm TWA; 480 mg/m<sup>3</sup> TWA (all isomers except tert-Butyl acetate)  
100 ppm STEL (all isomers except tert-Butyl acetate); 480 mg/m<sup>3</sup> STEL (all isomers except tert-Butyl acetate)  
100 ppm Ceiling; 480 mg/m<sup>3</sup> Ceiling

**Belgium:** 150 ppm TWA; 723 mg/m<sup>3</sup> TWA  
200 ppm STEL; 964 mg/m<sup>3</sup> STEL

**Bulgaria:** 950.0 mg/m<sup>3</sup> STEL  
710.0 mg/m<sup>3</sup> TWA

**Czech Republic:** 1200 mg/m<sup>3</sup> Ceiling

**Denmark:** Present

**Finland:** 150 ppm TWA; 710 mg/m<sup>3</sup> TWA  
150 ppm TWA; 720 mg/m<sup>3</sup> TWA  
200 ppm STEL; 960 mg/m<sup>3</sup> STEL

**France:** 150 ppm TWA; 710 mg/m<sup>3</sup> TWA  
200 ppm STEL [VLCT]; 940 mg/m<sup>3</sup> STEL [VLCT]

**Germany (TRGS):** 62 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2); 300 mg/m<sup>3</sup> TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2)

**Germany (DFG):** 100 ppm TWA MAK; 480 mg/m<sup>3</sup> TWA MAK  
200 ppm Peak; 960 mg/m<sup>3</sup> Peak

**Greece:** 150 ppm TWA; 710 mg/m<sup>3</sup> TWA  
200 ppm STEL; 950 mg/m<sup>3</sup> STEL

**Hungary:** sensitizer  
950 mg/m<sup>3</sup> STEL [CK]  
950 mg/m<sup>3</sup> TWA [AK]

**Latvia:** 200 mg/m<sup>3</sup> TWA

**Portugal:** 150 ppm TWA [VLE-MP]  
200 ppm STEL [VLE-CD]

**Romania:** 200 ppm STEL; 950 mg/m<sup>3</sup> STEL

**Slovak Republic:** 700 mg/m<sup>3</sup> Ceiling  
100 ppm TWA; 480 mg/m<sup>3</sup> TWA

**Slovenia:** 100 ppm STEL; 480 mg/m<sup>3</sup> STEL  
100 ppm TWA; 480 mg/m<sup>3</sup> TWA

**Spain:** 150 ppm TWA [VLA-ED]; 724 mg/m<sup>3</sup> TWA [VLA-ED]  
200 ppm STEL [VLA-EC]; 965 mg/m<sup>3</sup> STEL [VLA-EC]

**Sweden:** 100 ppm LLV; 500 mg/m<sup>3</sup> LLV  
150 ppm STV; 700 mg/m<sup>3</sup> STV  
150 ppm TWA  
200 ppm STEL

**Isoamyl acetate (123-92-2)**

<b>EU (IOELV):</b>	50 ppm TWA; 270 mg/m <sup>3</sup> TWA 100 ppm STEL; 540 mg/m <sup>3</sup> STEL
<b>Austria:</b>	50 ppm TWA; 270 mg/m <sup>3</sup> TWA 100 ppm STEL (4 X 15 min); 540 mg/m <sup>3</sup> STEL (4 X 15 min)
<b>Belgium:</b>	50 ppm TWA (as Pentyl acetate); 270 mg/m <sup>3</sup> TWA (as Pentyl acetate) 100 ppm STEL (as Pentyl acetate); 540 mg/m <sup>3</sup> STEL (as Pentyl acetate)
<b>Bulgaria:</b>	540.0 mg/m <sup>3</sup> STEL; 100 ppm STEL 270.0 mg/m <sup>3</sup> TWA; 50 ppm TWA
<b>Czech Republic:</b>	540 mg/m <sup>3</sup> Ceiling
<b>Cyprus:</b>	100 ppm STEL; 540 mg/m <sup>3</sup> STEL 50 ppm TWA; 270 mg/m <sup>3</sup> TWA
<b>Denmark:</b>	Present 50 ppm TWA; 271 mg/m <sup>3</sup> TWA
<b>Estonia:</b>	100 ppm STEL; 540 mg/m <sup>3</sup> STEL 50 ppm TWA; 270 mg/m <sup>3</sup> TWA
<b>Finland:</b>	50 ppm TWA; 270 mg/m <sup>3</sup> TWA 100 ppm STEL; 540 mg/m <sup>3</sup> STEL
<b>France:</b>	50 ppm TWA (restrictive limit); 270 mg/m <sup>3</sup> TWA (restrictive limit) 100 ppm STEL [VLCT] (restrictive limit); 540 mg/m <sup>3</sup> STEL [VLCT] (restrictive limit)
<b>Germany (TRGS):</b>	50 ppm TWA AGW (exposure factor 1); 270 mg/m <sup>3</sup> TWA AGW (exposure factor 1)
<b>Germany (DFG):</b>	50 ppm TWA MAK; 270 mg/m <sup>3</sup> TWA MAK 50 ppm Peak (all isomers); 270 mg/m <sup>3</sup> Peak (all isomers)
<b>Gibraltar:</b>	100 ppm STEL; 540 mg/m <sup>3</sup> STEL 50 ppm TWA; 270 mg/m <sup>3</sup> TWA
<b>Greece:</b>	100 ppm TWA; 530 mg/m <sup>3</sup> TWA 150 ppm STEL; 800 mg/m <sup>3</sup> STEL
<b>Hungary:</b>	540 mg/m <sup>3</sup> STEL [CK] 270 mg/m <sup>3</sup> TWA [AK]
<b>Ireland:</b>	50 ppm TWA; 260 mg/m <sup>3</sup> TWA 100 ppm STEL; 520 mg/m <sup>3</sup> STEL
<b>Italy:</b>	50 ppm TWA; 270 mg/m <sup>3</sup> TWA 100 ppm STEL; 540 mg/m <sup>3</sup> STEL
<b>Latvia:</b>	100 ppm STEL; 540 mg/m <sup>3</sup> STEL 50 ppm TWA; 270 mg/m <sup>3</sup> TWA
<b>Lithuania:</b>	100 ppm STEL; 540 mg/m <sup>3</sup> STEL 50 ppm TWA; 270 mg/m <sup>3</sup> TWA
<b>Luxembourg:</b>	100 ppm STEL; 540 mg/m <sup>3</sup> STEL 50 ppm TWA; 270 mg/m <sup>3</sup> TWA
<b>Malta:</b>	100 ppm STEL; 540 mg/m <sup>3</sup> STEL 50 ppm TWA; 270 mg/m <sup>3</sup> TWA
<b>Netherlands:</b>	530 mg/m <sup>3</sup> STEL
<b>Poland:</b>	500 mg/m <sup>3</sup> STEL [NDSCh] 250 mg/m <sup>3</sup> TWA
<b>Portugal:</b>	50 ppm TWA [VLE-MP] (as Pentyl acetate, all isomers) 100 ppm STEL [VLE-CD (regulated under Pentyl acetate, all isomers)]
<b>Romania:</b>	100 ppm STEL; 540 mg/m <sup>3</sup> STEL 56 ppm TWA; 300 mg/m <sup>3</sup> TWA; 50 ppm TWA (regulated under Isopentyl acetate); 270

	mg/m <sup>3</sup> TWA (regulated under Isopentyl acetate)
<b>Slovak Republic:</b>	540 mg/m <sup>3</sup> Ceiling
	50 ppm TWA; 270 mg/m <sup>3</sup> TWA
<b>Slovenia:</b>	100 ppm STEL; 540 mg/m <sup>3</sup> STEL
	270 ppm TWA; 50 mg/m <sup>3</sup> TWA
<b>Spain:</b>	50 ppm TWA [VLA-ED] (indicative limit value); 270 mg/m <sup>3</sup> TWA [VLA-ED] (indicative limit value)
	100 ppm STEL [VLA-EC]; 540 mg/m <sup>3</sup> STEL [VLA-EC]
<b>Sweden:</b>	50 ppm LLV; 270 mg/m <sup>3</sup> LLV
	100 ppm STV; 540 mg/m <sup>3</sup> STV
	50 ppm TWA
	100 ppm STEL

**Biological Limit Value****Component Analysis**

There are no biological limit values for any of this product's components.

**Derived No Effect Levels (DNELs)**

No DNELs available.

**Predicted No Effect Concentrations (PNECs)**

No PNECs available.

**Ventilation**

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

**8.2 Exposure Controls****Appropriate Engineering Controls****Eye / Face Protection**

Eye protection not required under normal conditions. Chemical goggles or safety glasses with side shields should be worn when handling a damaged cartridge.

**Skin Protection**

Protective clothing is not required under normal conditions. Wear neoprene or nitrile impervious gloves when handling damaged cartridge. Wash contaminated clothing before reuse.

**Glove Recommendations**

Wear neoprene or nitrile impervious gloves when handling damaged cartridge.

**Respiratory Protection**

Respiratory protection is not generally needed when using this product.



**\*\*\*Section 9 - PHYSICAL AND CHEMICAL PROPERTIES\*\*\***

**9.1 Information on Basic Physical and Chemical Properties**

<b>Physical State:</b>	Liquid	<b>Appearance:</b>	ink cartridge containing black liquid ink
<b>Color:</b>	black	<b>Physical Form:</b>	liquid
<b>Odor:</b>	characteristic odor	<b>Odor Threshold:</b>	Not available
<b>pH:</b>	Not applicable	<b>Melting Point:</b>	Not available
<b>Boiling Point:</b>	Not available	<b>Decomposition:</b>	Not available
<b>Flash Point:</b>	>100 °C	<b>Evaporation Rate:</b>	Not available
<b>LEL:</b>	Not available	<b>UEL:</b>	Not available
<b>Vapor Pressure:</b>	Not available	<b>Vapor Density (air = 1):</b>	Not available
<b>Density:</b>	Not available	<b>Specific Gravity (water = 1):</b>	Not available
<b>Water Solubility:</b>	Not available	<b>Coeff. Water/Oil Dist:</b>	Not available
<b>Auto Ignition:</b>	Not available	<b>Viscosity:</b>	Not available
<b>Volatility:</b>	Not available		

**\*\*\*Section 10 - STABILITY AND REACTIVITY\*\*\***

**10.1 Reactivity**

Heating may cause a fire

**10.2 Chemical Stability**

Unstable on exposure to light. Unstable on exposure to heat.

**10.3 Possibility of Hazardous Reactions**

Uncured ink will polymerize on exposure to light.

**10.4 Conditions to Avoid**

Avoid exposure to heat and light.

**10.5 Incompatible Materials**

Not applicable under normal conditions of use and storage.

**10.6 Hazardous Decomposition Products**
**Thermal Decomposition Products**

**Combustion:** oxides of carbon, oxides of nitrogen, oxides of phosphorus

**\*\*\*Section 11 - TOXICOLOGICAL INFORMATION\*\*\***

**11.1 Information on Toxicological Effects**
**Acute and Chronic Toxicity**

No hazard is expected from the normal use of this product. While unlikely, uncured ink may leak from damaged ink cartridges and cause skin and eye irritation. Contact with skin may cause tingling sensation or skin irritation. Contact with eyes may cause eye irritation, inflammation, or eye damage.

**Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

**Xylenes (o-, m-, p- isomers) (1330-20-7)**

Inhalation LC50 Rat 47635 mg/L 4 h; Oral LD50 Rat 4300 mg/kg

**Benzyl alcohol (100-51-6)**

Dermal LD50 Rabbit 2 g/kg; Inhalation LC50 Rat 8.8 mg/L 4 h; Oral LD50 Rat 1230 mg/kg

**2,6-Di-tert-butyl-p-cresol (128-37-0)**

Oral LD50 Rat 890 mg/kg

**Ethylbenzene (100-41-4)**

Inhalation LC50 Rat 17.2 mg/L 4 h; Oral LD50 Rat 3500 mg/kg; Dermal LD50 Rabbit 15354 mg/kg

**Geraniol (106-24-1)**

Dermal LD50 Rabbit &gt;5 g/kg; Oral LD50 Rat 3600 mg/kg

**Citral (5392-40-5)**

Dermal LD50 Rabbit 2250 mg/kg; Oral LD50 Rat 4950 mg/kg

**Propylene glycol monomethyl ether acetate (108-65-6)**

Dermal LD50 Rabbit &gt;5 g/kg; Oral LD50 Rat 8532 mg/kg

**n-Butyl acetate (123-86-4)**

Dermal LD50 Rabbit &gt;17600 mg/kg; Inhalation LC50 Rat 390 ppm 4 h; Inhalation LC50 Rat 390 ppm 4 h

**Irritation / Corrosivity**

Contact with uncured ink may cause skin and eye irritation. Inhalation may cause respiratory tract irritation.

**Respiratory Sensitization**

No data available for the mixture.

**Skin Sensitization**

Component data indicate the substance is sensitizing. Uncured ink may cause an allergic response in sensitized individuals.

**Germ Cell Mutagenicity**

No data available for the mixture.

**Carcinogenicity****Component Carcinogenicity****Xylenes (o-, m-, p- isomers) (1330-20-7)**

IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

**2,6-Di-tert-butyl-p-cresol (128-37-0)**

IARC: Supplement 7 [1987]; Monograph 40 [1986] (Group 3 (not classifiable))

DFG: Category 4 (no significant contribution to human cancer)

**Ethylbenzene (100-41-4)**

IARC: Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))

DFG: Category 4 (no significant contribution to human cancer)

**Carbon black (1333-86-4)**

IARC: Monograph 93 [2010]; Monograph 65 [1996] (Group 2B (possibly carcinogenic to humans))

DFG: Category 3B (could be carcinogenic for man, inhalable fraction)

**Reproductive Toxicity**

Available data characterizes components of this product as reproductive hazards.

**Specific Target Organ Toxicity - Single Exposure**

respiratory system

**Specific Target Organ Toxicity - Repeated Exposure**

No data available.

**Aspiration Hazard**

No data available for the mixture.



# Safety Data Sheet

Material Name: OBJET TANGOBLACK FLX973

MSDS ID: DOC-06149\_B

In Compliance with Regulation (EC) 1907/2006 (REACH) as Amended

<b>***Section 12 - ECOLOGICAL INFORMATION***</b>
--

## 12.1 Toxicity

Harmful to aquatic life with long lasting effects.

**Component Analysis - Aquatic Toxicity**

Data may be available for the product or its components (if applicable, see below).

**Xylenes (o-, m-, p- isomers) (1330-20-7)**

**Fish:** 96 Hr LC50 Pimephales promelas: 13.4 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 2.661 - 4.093 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 13.5 - 17.3 mg/L; 96 Hr LC50 Lepomis macrochirus: 13.1 - 16.5 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 19 mg/L; 96 Hr LC50 Lepomis macrochirus: 7.711 - 9.591 mg/L [static]; 96 Hr LC50 Pimephales promelas: 23.53 - 29.97 mg/L [static]; 96 Hr LC50 Cyprinus carpio: 780 mg/L [semi-static]; 96 Hr LC50 Cyprinus carpio: >780 mg/L; 96 Hr LC50 Poecilia reticulata: 30.26 - 40.75 mg/L [static]

**Invertebrate:** 48 Hr EC50 water flea: 3.82 mg/L; 48 Hr LC50 Gammarus lacustris: 0.6 mg/L

**Benzyl alcohol (100-51-6)**

**Fish:** 96 Hr LC50 Pimephales promelas: 460 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 10 mg/L [static]

**Algae:** 3 Hr EC50 Anabaena variabilis: 35 mg/L

**Invertebrate:** 48 Hr EC50 water flea: 23 mg/L

**2,6-Di-tert-butyl-p-cresol (128-37-0)**

**Fish:** 48 Hr LC50 Oryzias latipes: 5 mg/L

**Algae:** 72 Hr EC50 Pseudokirchneriella subcapitata: 6 mg/L; 72 Hr EC50 Desmodesmus subspicatus: >0.42 mg/L

**Ethylbenzene (100-41-4)**

**Fish:** 96 Hr LC50 Oncorhynchus mykiss: 11.0 - 18.0 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 4.2 mg/L [semi-static]; 96 Hr LC50 Pimephales promelas: 7.55 - 11 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 32 mg/L [static]; 96 Hr LC50 Pimephales promelas: 9.1 - 15.6 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 9.6 mg/L [static]

**Algae:** 72 Hr EC50 Pseudokirchneriella subcapitata: 4.6 mg/L; 96 Hr EC50 Pseudokirchneriella subcapitata: >438 mg/L; 72 Hr EC50 Pseudokirchneriella subcapitata: 2.6 - 11.3 mg/L [static]; 96 Hr EC50 Pseudokirchneriella subcapitata: 1.7 - 7.6 mg/L [static]

**Invertebrate:** 48 Hr EC50 Daphnia magna: 1.8 - 2.4 mg/L

**Carbon black (1333-86-4)**

**Invertebrate:** 24 Hr EC50 Daphnia magna: >5600 mg/L

**Citral (5392-40-5)**

**Fish:** 96 Hr LC50 Leuciscus idus: 4.6 - 10 mg/L [static]

**Algae:** 72 Hr EC50 Desmodesmus subspicatus: 16 mg/L; 96 Hr EC50 Desmodesmus subspicatus: 19 mg/L

**Invertebrate:** 48 Hr EC50 Daphnia magna: 7 mg/L

**Propylene glycol monomethyl ether acetate (108-65-6)**

**Fish:** 96 Hr LC50 Pimephales promelas: 161 mg/L [static]

**Invertebrate:** 48 Hr EC50 Daphnia magna: >500 mg/L

**n-Butyl acetate (123-86-4)**

**Fish:** 96 Hr LC50 Pimephales promelas: 17 - 19 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 100 mg/L [static]; 96 Hr LC50 Leuciscus idus: 62 mg/L [static]

**Algae:** 72 Hr EC50 Desmodesmus subspicatus: 674.7 mg/L

**Invertebrate:** 24 Hr EC50 Daphnia magna: 72.8 mg/L

**12.2 Persistence and Degradability**

No data available for the mixture.

**12.3 Bioaccumulative Potential**

No data available for the mixture.

**12.4 Mobility in Soil**

No data available for the mixture.

**12.5 Results of PBT and vPvB Assessment**

No information available.

**EU - Interim Strategy for Management of PBT and vPvB Substances (PBT Assessments)****2,6-Di-tert-butyl-p-cresol (128-37-0)**

Not fulfilling PBT and vPvB criteria

**12.6 Other Adverse Effects**

No information available.

**\*\*\*Section 13 - DISPOSAL CONSIDERATIONS\*\*\*****13.1 Waste Treatment Methods**

Dispose in accordance with all applicable regulations. Hazardous Waste Number(s): 08 03 12\*

Refer to manufacturer/supplier for information on recovery/recycling. Do not landfill. Avoid discharge into drains or surface water. See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

**\*\*\*Section 14 - TRANSPORT INFORMATION\*\*\*****Transportation**

Not regulated as a hazardous material.

**International Bulk Chemical Code**

This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

**Xylenes (o-, m-, p- isomers) (1330-20-7)**

IBC Code: Category Y

**Benzyl alcohol (100-51-6)**

IBC Code: Category Y

**Ethylbenzene (100-41-4)**

IBC Code: Category Y

**Dipentene (138-86-3)**

IBC Code: Category Y

**Propylene glycol monomethyl ether acetate (108-65-6)**

IBC Code: Category Z

**\*\*\*Section 15 - REGULATORY INFORMATION\*\*\*****15.1 Safety, Health and Environmental Regulations / Legislation Specific for the Substance or Mixture****EU - REACH (1907/2006) - Annex XIV List of Substances Subject to Authorisation**

No components of this material are listed.

**EU - REACH (1907/2006) - Article 59(1) Candidate List of Substances for Eventual Inclusion in Annex XIV**

No components of this material are listed.

**EU - REACH (1907/2006) - Annex XVII Restrictions of Certain Dangerous Substances, Mixtures and Articles**

No components of this material are listed.

**Germany Regulations****Germany Water Classification****2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo- (5888-33-5)**

ID Number 2247, hazard class 2 - hazard to waters

**Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide (75980-60-8)**

ID Number 6366, hazard class 2 - hazard to waters

**Xylenes (o-, m-, p- isomers) (1330-20-7)**

ID Number 206, hazard class 2 - hazard to waters

**Benzyl alcohol (100-51-6)**

ID Number 216, hazard class 1 - low hazard to waters

**2,6-Di-tert-butyl-p-cresol (128-37-0)**

ID Number 724, hazard class 1 - low hazard to waters

**Ethylbenzene (100-41-4)**

ID Number 99, hazard class 1 - low hazard to waters

**Carbon black (1333-86-4)**

ID Number 1742, not considered hazardous to water

**Dipentene (138-86-3)**

ID Number 87, hazard class 2 - hazard to waters

**Geraniol (106-24-1)**

ID Number 2852, hazard class 1 - low hazard to waters

**Citral (5392-40-5)**

ID Number 1173, hazard class 1 - low hazard to waters

**Propylene glycol monomethyl ether acetate (108-65-6)**

ID Number 5033, hazard class 1 - low hazard to waters

**n-Butyl acetate (123-86-4)**

ID Number 42, hazard class 1 - low hazard to waters

**Isoamyl acetate (123-92-2)**

ID Number 1653, hazard class 1 - low hazard to waters

**Denmark Regulations****Environmental Protection Agency List of Undesirable Substances****Benzyl alcohol (100-51-6)**

Fragrances in cosmetics, cleaning agents, odor removers and other consumer products

Substances that are only subject to partial restrictions on use, but other uses can also be objectionable from a health and environmental standpoint; Most often fragrances/perfumes are not necessary for the main function of the product and it is therefore a question of needless exposure of consumers to chemical substances that can represent a risk of development of allergy; Substances have special Danish focus

**2,6-Di-tert-butyl-p-cresol (128-37-0)**

Present

**Citral (5392-40-5)**

Fragrances in cosmetics, cleaning agents, odor removers and other consumer products

Substances that are only subject to partial restrictions on use, but other uses can also be objectionable from a health and environmental standpoint; Most often fragrances/perfumes are not necessary for the main function of the product and it is therefore a question of needless exposure of consumers to chemical substances that can represent a risk of development of allergy; Substances have special Danish focus

**Advisory List for Self-Classification of Dangerous Substances**
**2-Propenoic acid, 2-[[[(butylamino)carbonyl]oxy]ethyl ester (63225-53-6)**

Carc.Cat.3; R40

**2,6-Di-tert-butyl-p-cresol (128-37-0)**

Carc.Cat.3; R40

Muta.Cat.3; R68

N; R50/53

Xi; R38

Xn; R22

**Geraniol (106-24-1)**

Xi; R38

**Advisory List for CLP-Classifications**
**2-Propenoic acid, 2-[[[(butylamino)carbonyl]oxy]ethyl ester (63225-53-6)**

Carc2

**2,6-Di-tert-butyl-p-cresol (128-37-0)**

Carc2,Muta2,AcuteTox4,SkinIrr2,Chron1

**Geraniol (106-24-1)**

SkinIrr2

**EU Inventory**
**Substance Analysis - Inventory**

Component	CAS	EEC
Acrylic oligomer	--	EIN
2-Propenoic acid, 1,7,7-	5888-33-5	EIN
Photo initiator	--	EIN
Xylenes (o-, m-, p- isomers)	1330-20-7	EIN
Benzyl alcohol	100-51-6	EIN
Acrylic acid ester	52408-84-1	NLP
2,6-Di-tert-butyl-p-cresol	128-37-0	EIN
Ethylbenzene	100-41-4	EIN
Carbon black	1333-86-4	EIN
Dipentene	138-86-3	EIN
Geraniol	106-24-1	EIN
Citral	5392-40-5	EIN
Propylene glycol monomethyl ether acetate	108-65-6	EIN
n-Butyl acetate	123-86-4	EIN
Isoamyl acetate	123-92-2	EIN

**15.2 Chemical Safety Assessment**

No chemical safety assessment has been carried out for the substance/mixture.



**\*\*\*Section 16 - OTHER INFORMATION\*\*\*****16.1 Indication of changes**

New MSDS: 1/14/2013

**16.2 Key / Legend**

ADR - European Road Transport; EEC - European Economic Community; EIN (EINECS) - European Inventory of Existing Commercial Chemical Substances; ELN (ELINCS) - European List of Notified Chemical Substances; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; Kow - Octanol/water partition coefficient; LEL - Lower Explosive Limit; RID - European Rail Transport; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TWA - Time Weighted Average; UEL - Upper Explosive Limit

**16.3 Key literature references and sources for data**

Available upon request

**16.4 Methods used for classification of mixture according to Regulation (EC) No 1272/2008**

Available upon request

**16.5 Full Text of R Phrases in Section 3**

**R10** Flammable.

**R11** Highly flammable.

**R20/21** Harmful by inhalation and in contact with skin.

**R36/37/38** Irritating to eyes, respiratory system and skin.

**R43** May cause sensitization by skin contact.

**R50/53** Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**R51/53** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**R53** May cause long-term adverse effects in the aquatic environment.

**R62** Possible risk of impaired fertility.

**R66** Repeated exposure may cause skin dryness or cracking.

**R67** Vapors may cause drowsiness and dizziness.

**16.6 Training Advice**

Read the Safety Data Sheet before handling product.

**16.7 Other Information**

The information in this safety data sheet is based on data and samples provided to a third party SDS author. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned in this safety data sheet. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question.

Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. Stratasys does not guarantee the accuracy or exhaustiveness of the information provided. Use of this safety data sheet is subject to the license and liability limiting conditions as stated in your license agreement. All intellectual property rights to this sheet are the property of Stratasys and its distribution and reproduction are limited.





# Safety Data Sheet

Material Name: OBJET TANGOBLACK FLX973

MSDS ID: DOC-06149\_B

In Compliance with Regulation (EC) 1907/2006 (REACH) as Amended

End of Sheet DOC-06149\_B