

# SAFETY DATA SHEET

This safety data sheet complies with the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issue Date 03-Mar-2016

Revision Date 03-Mar-2016

Version 1

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

Product Name Sign-Tronic 257-S UV Black

Contains Morpholine, 4-(1-oxo-2-propenyl)-, 6-Quinolinamine,  $\gamma$ -Butyrolactone, phenylbis(2,4,6-trimethylbenzoyl)-phosphine oxide, 2-phenoxyethyl acrylate, diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide

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

Recommended Use Digital Printing

Uses advised against No information available

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

#### Supplier

SIGNTRONIC 2 WESSEX STREET PAARDEN EILAND CAPE TOWN 7420

For further information, please contact

Contact Point Mr A. Wolman

### 1.4. Emergency telephone number

Emergency Telephone During normal opening times: +27 82 827 8888

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 1 - (H318)
Skin sensitization	Category 1A - (H317)
Specific target organ toxicity (single exposure)	Category 3 - (H335)
Specific target organ toxicity (repeated exposure)	Category 2 - (H373)
Chronic aquatic toxicity	Category 2 - (H411)

Classification according to Directive 67/548/EEC or 1999/45/EC

Full text of R-phrases: see section 16

#### Hazard symbols

Xn - Harmful

N - Dangerous for the environment

#### R-code(s)

Xn;R48/22 - Xi;R41 - R43 - N;R51/53

### 2.2. Label elements

#### Product identifier

Contains Morpholine, 4-(1-oxo-2-propenyl)-, 6-Quinolinamine,  $\gamma$ -Butyrolactone, phenylbis(2,4,6-trimethylbenzoyl)-phosphine oxide, 2-phenoxyethyl acrylate, diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide

**Signal word**

Danger

**Hazard statements**

H315 - Causes skin irritation

H318 - Causes serious eye damage

H317 - May cause an allergic skin reaction

H335 - May cause respiratory irritation

H373 - May cause damage to organs through prolonged or repeated exposure

H411 - Toxic to aquatic life with long lasting effects

Contains Propoxylated neopentyl glycol, Oxybis(methyl-2,1-ethanediyl diacrylate, 1,6-Hexanediol diacrylate EUH208 - May produce an allergic reaction

**Precautionary Statements - EU (§28, 1272/2008)**

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor

P280 - Wear eye protection/ face protection

P314 - Get medical advice/attention if you feel unwell

P501 - Dispose of contents/container to industrial incineration plant

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

**2.3. Other hazards**

No information available

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Chemical Name	EC No	CAS No	Weight-%	Classification according to Directive 67/548/EEC or 1999/45/EC	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Proprietary Acrylic Ester Derivative	Listed	-	<60	-	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Aquatic Chronic 2 (H411)	No data available
Morpholine, 4-(1-oxo-2-propenyl)-	418-140-1	5117-12-4	<10	Xn; R22-48/22 Xi; R41 R43	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Skin Sens. 1 (H317) STOT RE 2 (H373)	No data available
phenylbis(2,4,6-trimethylbenzoyl)-phosphine oxide	423-340-5	162881-26-7	<8	R43 R53	Skin Sens. 1 (H317) Aquatic Chronic 4 (H413)	No data available
2-phenoxyethyl acrylate	256-360-6	48145-04-6	<10	-	Skin Sens. 1 (H317) Aquatic Chronic 2 (H411)	No data available
Multifunctional Amine Acrylate	-	67906-98-3	<5	Xi; R36/38	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	No data available
6-Quinolinamine	219-606-3	2478-10-6	<10	Xn	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318)	No data available

					Skin Sens. 1A (H317)	
diphenyl (2,4,6-trimethylbenzoyl ) phosphine oxide	278-355-8	75980-60-8	<3	Repr.Cat.3; R62 R43 N;51/53	Skin Sens. 1 (H317) Repr. 2 (H361) Aquatic Chronic 2 (H411)	No data available
Black Pigment	Listed	-	<5	-	No data available	No data available
$\gamma$ -Butyrolactone	202-509-5	96-48-0	<5	Xn;R22 Xi; R41 R67	Acute Tox. 4 (H302) Eye Dam. 1 (H318) STOT SE 3 (H336)	No data available
Propoxylated neopentyl glycol	-	84170-74-1	<10	Xi; R36/37/38	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) STOT SE 3 (H335)	No data available
Oxybis(methyl-2,1-eth anediyl diacrylate	260-754-3	57472-68-1	<10	Xi;R41,38 R43	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317)	No data available
1,6-Hexanediol diacrylate	235-921-9	13048-33-4	<10	Xi; R36/38 R43	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Aquatic Chronic 3 (H412)	No data available

**Full text of R-phrases: see section 16**

**Full text of H- and EUH-phrases: see section 16**

## Section 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

#### General advice

If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

#### Inhalation

Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Call a physician. Artificial respiration and/or oxygen may be necessary. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician.

#### Skin contact

Consult a physician if necessary. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash off immediately with soap and plenty of water. Immediate medical attention is not required.

#### Eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician. Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Ingestion** Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician. Rinse mouth. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

**Self-protection of the first aider** Use personal protective equipment as required.

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

**Symptoms** No information available.

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

**Note to physicians** May cause sensitization in susceptible persons. Treat symptomatically.

## **Section 5: FIRE FIGHTING MEASURES**

### **5.1. Extinguishing media**

#### **Suitable extinguishing media**

Dike fire-control water for later disposal. Dry chemical, CO<sub>2</sub>, water spray or regular foam. Water spray, fog or regular foam. Move containers from fire area if you can do it without risk.

#### **Unsuitable extinguishing media**

Do not scatter spilled material with high pressure water streams

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

Some may be transported hot Some may burn but none ignite readily Those substances designated with a "P" may polymerize explosively when heated or involved in a fire In the event of fire and/or explosion do not breathe fumes May cause sensitization in susceptible persons Thermal decomposition can lead to release of irritating and toxic gases and vapors

### **5.3. Advice for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

## **Section 6: ACCIDENTAL RELEASE MEASURES**

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

#### **Personal precautions**

Avoid contact with eyes and skin. Avoid contact with skin, eyes or clothing. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

#### **For emergency responders**

Use personal protection recommended in Section 8.

### **6.2. Environmental precautions**

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological information.

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

**Methods for containment** Prevent further leakage or spillage if safe to do so. Prevent dust cloud.

**Methods for cleaning up** Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly. Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled

containers.

#### 6.4. Reference to other sections

See section 8 for more information. See section 13 for more information.

## Section 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

#### **Advice on safe handling**

Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Use with local exhaust ventilation.

#### **General Hygiene Considerations**

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.

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

#### **Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

#### **Incompatible materials**

None known based on information supplied.

### 7.3. Specific end use(s)

#### **Risk Management Methods (RMM)**

The information required is contained in this Material Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Chemical Name	European Union	United Kingdom	France	Spain	Germany
Black Pigment	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>	-
Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
Black Pigment	-	TWA: 3.5 mg/m <sup>3</sup>	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>
γ-Butyrolactone 96-48-0	-	-	-	TWA: 50 ppm TWA: 14 mg/m <sup>3</sup> STEL: 250 ppm STEL: 70 mg/m <sup>3</sup> iho*	-
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Black Pigment	-	-	TWA: 4.0 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup> STEL: 3.5 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

### 8.2. Exposure controls

**Engineering Controls** Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment**  
**Eye/face protection** Tight sealing safety goggles. Face protection shield.

**Skin and body protection** Suitable protective clothing. Suitable protective clothing. Apron. Gloves made of plastic or rubber.

**Environmental exposure controls** Do not allow into any sewer, on the ground or into any body of water.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

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

<b>Physical state</b>	liquid	<b>Odor</b>	Characteristic
<b>Appearance</b>	Liquid	<b>Odor threshold</b>	No information available
<b>Color</b>	black		

Property	Values	Remarks • Method
<b>pH</b>		No information available
<b>Melting point / freezing point</b>		
<b>Boiling point / boiling range</b>	> 200 °C / 392 °F	
<b>Flash point</b>	> 100 °C / > 212 °F	
<b>Evaporation rate</b>		No information available
<b>Flammability (solid, gas)</b>		No information available
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit:</b>		No information available
<b>Lower flammability limit:</b>		No information available
<b>Vapor pressure</b>		No information available
<b>Vapor density</b>		No information available
<b>Relative density</b>		
<b>Water solubility</b>	Immiscible in water	
<b>Solubility(ies)</b>		No information available
<b>Partition coefficient</b>		
<b>Autoignition temperature</b>		
<b>Decomposition temperature</b>		No information available
<b>Kinematic viscosity</b>		No information available
<b>Dynamic viscosity</b>		No information available
<b>Explosive properties</b>	Not an explosive	
<b>Oxidizing properties</b>	Not applicable	

### 9.2. Other information

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	No information available

## Section 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

No data available.

### 10.2. Chemical stability

Stable under normal conditions.

#### Explosion data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

### 10.3. Possibility of hazardous reactions

#### **Possibility of Hazardous Reactions**

None under normal processing.

### 10.4. Conditions to avoid

None known.

#### 10.5. Incompatible materials

No information available.

#### 10.6. Hazardous decomposition products

None under normal use conditions.

## Section 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Acute toxicity

##### Product Information

Product does not present an acute toxicity hazard based on known or supplied information.

<b>Inhalation</b>	No data available.
<b>Eye contact</b>	No data available.
<b>Skin contact</b>	No data available.
<b>Ingestion</b>	No data available.

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	2,107.00 mg/kg
<b>ATEmix (dermal)</b>	36,349.95 mg/kg

##### Unknown acute toxicity

97.339 % of the mixture consists of ingredient(s) of unknown toxicity.

14.75 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

19 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

94.964 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

97.339 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

92.964 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Proprietary Acrylic Ester Derivative	= 4890 mg/kg ( Rat )	> 5 g/kg ( Rabbit )	
2-phenoxyethyl acrylate	= 4660 µL/kg ( Rat )	= 2540 µL/kg ( Rabbit )	
6-Quinolinamine	871	>2.000mg/kg	
diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	>5000 mg/kg	>2000 mg/kg	
Black Pigment	> 15400 mg/kg ( Rat )	> 3 g/kg ( Rabbit )	
γ-Butyrolactone	= 1540 mg/kg ( Rat )		> 5100 mg/m <sup>3</sup> ( Rat ) 4 h
Oxybis(methyl-2,1-ethanediyl diacrylate	= 4600 mg/kg ( Rat )	> 2 g/kg ( Rabbit )	
1,6-Hexanediol diacrylate	= 5 g/kg ( Rat )	= 3600 µL/kg ( Rabbit )	

**Skin corrosion/irritation** No information available.

**Serious eye damage/eye irritation** No information available.

**Sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

<b>STOT - repeated exposure</b>	No information available.
<b>Target Organ Effects</b>	Eyes, Lymphatic System, Respiratory system.
<b>Aspiration hazard</b>	No information available.

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

Unknown aquatic toxicity 26.186 % of the mixture consists of component(s) of unknown hazards to the aquatic environment  
 26.186 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Black Pigment	10000 mg/l / 3 d scenedesmus subspicatus	1000 mg/l / 96 h Brachydanio rerio)	5600: 24 h Daphnia magna mg/L EC50
γ-Butyrolactone	360: 72 h Desmodesmus subspicatus mg/L EC50	220 - 460: 96 h Leuciscus idus mg/L LC50 static	500: 48 h Daphnia magna Straus mg/L EC50

### 12.2. Persistence and degradability

No information available.

### 12.3. Bioaccumulative potential

No information available.

Chemical Name	Partition coefficient
γ-Butyrolactone	-0.566

### 12.4. Mobility in soil

#### **Mobility in soil**

No information available.

### 12.5. Results of PBT and vPvB assessment

No information available.

### 12.6. Other adverse effects

No information available

## Section 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

<b>Waste from residues/unused products</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated packaging</b>	Improper disposal or reuse of this container may be dangerous and illegal.
<b>Other Information</b>	Waste codes should be assigned by the user based on the application for which the product was used.

## Section 14: TRANSPORT INFORMATION



**IMDG**

<b>14.1 UN/ID no</b>	UN3082
<b>14.2 Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>14.3 Hazard Class</b>	9
<b>14.4 Packing Group</b>	III
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Isobornyl acrylate monomer, diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide), 9, III
<b>14.5 Marine pollutant</b>	Not applicable
<b>Environmental hazard</b>	Yes
<b>14.6 Special Provisions</b>	274, 335
<b>EmS-No</b>	F-A, S-F
<b>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	No information available

**RID**

<b>14.1 UN/ID no</b>	UN3082
<b>14.2 Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>14.3 Hazard Class</b>	9
<b>14.4 Packing Group</b>	III
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Isobornyl acrylate monomer, diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide), Environmentally Hazardous, 9, III
<b>14.5 Environmental hazard</b>	Yes
<b>14.6 Special Provisions</b>	None
<b>Classification code</b>	M6

**ADR**

<b>14.1 UN/ID no</b>	UN3082
<b>14.2 Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>14.3 Hazard Class</b>	9
<b>Labels</b>	9
<b>14.4 Packing Group</b>	III
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Isobornyl acrylate monomer, diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide), Environmentally Hazardous, 9, III, (E)
<b>14.5 Environmental hazard</b>	Yes
<b>14.6 Special Provisions</b>	274, 335, 601, 375
<b>Classification code</b>	M6
<b>Tunnel restriction code</b>	(E)

**IATA**

<b>14.1 UN/ID no</b>	UN3082
<b>14.2 Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>14.3 Hazard Class</b>	9
<b>14.4 Packing Group</b>	III
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Isobornyl acrylate monomer, diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide), 9, III
<b>14.5 Environmental hazard</b>	Yes
<b>14.6 Special Provisions</b>	A97, A158, A197
<b>ERG Code</b>	9L

<b>Section 15: REGULATORY INFORMATION</b>
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**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Chemical Name	French RG number	Title
Black Pigment	RG 16, RG 16bis	-
γ-Butyrolactone 96-48-0	RG 84	-

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**Authorizations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

**Persistent Organic Pollutants**

Not applicable

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009** Not applicable

**International Inventories**

**All of the components in the product are on the following Inventory lists** No information available.

**15.2. Chemical safety assessment**

No information available

**Section 16: OTHER INFORMATION**
**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of R-phrases referred to under sections 2 and 3**

R43 - May cause sensitization by skin contact

R41 - Risk of serious damage to eyes

R22 - Harmful if swallowed

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

R62 - Possible risk of impaired fertility

R67 - Vapors may cause drowsiness and dizziness

R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed

R36/38 - Irritating to eyes and skin

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

**Full text of H-Statements referred to under section 3**

H315 - Causes skin irritation

H361d - Suspected of damaging the unborn child

H336 - May cause drowsiness or dizziness

H373 - May cause damage to organs through prolonged or repeated exposure if inhaled

H304 - May be fatal if swallowed and enters airways

H225 - Highly flammable liquid and vapor

H319 - Causes serious eye irritation

H317 - May cause an allergic skin reaction

H412 - Harmful to aquatic life with long lasting effects

H413 - May cause long lasting harmful effects to aquatic life

H302 - Harmful if swallowed

H318 - Causes serious eye damage

H411 - Toxic to aquatic life with long lasting effects

H335 - May cause respiratory irritation

H361 - Suspected of damaging fertility or the unborn child if inhaled

**Legend**

SVHC: Substances of Very High Concern for Authorization:

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

**Issue Date** 03-Mar-2016  
**Revision Date** 03-Mar-2016  
**Revision Note** Not applicable.

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**End of Safety Data Sheet**