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 Yellow

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

Acute toxicity - Oral	Category 4 - (H302)
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

R-code(s)
Xn;R48/22 - Xi;R41 - R43 - R51/53

2.2. Label elements

Product identifier
Contains γ-Butyrolactone, Morpholine, 4-(1-oxo-2-propenyl)-, 6-Quinolinamine, 2-phenoxyethyl acrylate, phenylbis(2,4,6-trimethylbenzoyl)-phosphine oxide, diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide

Signal word
Danger

Hazard statements
H302 - Harmful if swallowed
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 diacylate, 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
6-Quinolinamine	219-606-3	2478-10-6	<10	Xn	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1A (H317)	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
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
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
Yellow Pigment	Listed	-	<5	-	No data available	No data available
γ-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-ethanediyl diacylate	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. 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 off immediately with soap and plenty of water. Immediate medical attention is not required. If skin irritation persists, call a physician.

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, CO2, 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 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 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. Sweep up and shovel into suitable containers for disposal. After cleaning, flush

away traces with water. Take precautionary measures against static discharges.

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. 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	Italy	Portugal	Netherlands	Finland	Denmark
Yellow Pigment	-	-	-	TWA: 0.05 mg/m³ TWA: 0.01 mg/m³	-
γ-Butyrolactone 96-48-0	-	-	-	TWA: 50 ppm TWA: 14 mg/m³ STEL: 250 ppm STEL: 70 mg/m³ iho*	-
Chemical Name	**Austria**	**Switzerland**	**Poland**	**Norway**	**Ireland**
Yellow Pigment	-	-	TWA: 0.25 mg/m³	TWA: 0.05 mg/m³ STEL: 0.05 mg/m³	TWA: 1 mg/m³ STEL: 3 mg/m³

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

Physical state	liquid		
Appearance	Liquid	**Odor**	Characteristic
Color	yellow	**Odor threshold**	No information available

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

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	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.

Inhalation No data available.
Eye contact No data available.
Skin contact No data available.
Ingestion No data available.

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

ATEmix (oral) 1,967.00 mg/kg
ATEmix (dermal) 35,964.00 mg/kg

Unknown acute toxicity

96.01 % of the mixture consists of ingredient(s) of unknown toxicity.
12.016 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
21.266 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
95.01 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
96.01 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
92.11 % 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)	
6-Quinolinamine	871	>2.000mg/kg	
2-phenoxyethyl acrylate	= 4660 µL/kg (Rat)	= 2540 µL/kg (Rabbit)	
diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	>5000 mg/kg	>2000 mg/kg	
γ-Butyrolactone	= 1540 mg/kg (Rat)		> 5100 mg/m³ (Rat) 4 h
Oxybis(methyl-2,1-ethanediyl diacylate	= 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.

STOT - repeated exposure No information available.

Target Organ Effects lungs, Nasal Cavities, Skin.

Aspiration hazard No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Unknown aquatic toxicity 30.468 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

30.468 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
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

Waste from residues/unused products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Improper disposal or reuse of this container may be dangerous and illegal.

Other Information Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

IMDG

14.1 UN/ID no UN3082
14.2 Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
14.3 Hazard Class 9
14.4 Packing Group III

Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Isobornyl acrylate monomer, diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide), 9, III
14.5 Marine pollutant	Not applicable
Environmental hazard	Yes
14.6 Special Provisions	274, 335
EmS-No	F-A, S-F
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

RID

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

ADR

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

IATA

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

Section 15: REGULATORY INFORMATION

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

France

Occupational Illnesses (R-463-3, France)

Chemical Name	French RG number	Title
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