SAFETY DATA SHEET

Version 3.0
Revision Date 3/01/2015

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : **Syna-TPO-L**
ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate

CAS-No. : 84434-11-7

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

Identified uses : Weathering-resistant and radiation-curing paints photoinitiator

1.3 Details of the supplier of the safety data sheet

Company : Synasia Inc.
240 Amboy Ave.
Metuchen New Jersey 08840
USA

Contact Person (E-mail) : Larry Qiu (lqiu@synasia.com)

Telephone : 1-732-205-9880
Fax : 1-732-205-1788

1.4 Emergency telephone number

Emergency Phone # : 1-973-641-0862

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

PHYSICAL HAZARDS	Not classified
HEALTH HAZARDS	Not classified
ENVIRONMENTAL HAZARDS	Not classified

2.2 GHS Label elements, including precautionary statements

Pictogram None
Signal word None

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula : $C_{18}H_{21}O_3P$
Molecular Weight : 316.33 g/mol
CAS-No. : 84434-11-7
EC-No. : 282-810-6

Hazardous components

Component	Classification	Concentration
ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate		
		95 - 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Remove contaminated clothing. Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. If irritation develops, consult a physician.

In case of eye contact
FlushWash affected eyes for at least 15 minutes under running water with eyelids held open as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, dry extinguishing media, foam.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, nitrogen oxides (NOx)

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store in a light-impervious container. Protect contents from the effects of light.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters
Provide local exhaust ventilation to control vapours/mists.

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: Viscous liquid Colour: Yellow
b)	Odour	Faint specific odour
c)	Odour Threshold	no data available
d)	pH	5-7
e)	Melting point/freezing point	Freezing point/ range: Approx. 16 °C (60.8 °F)
f)	Initial boiling point and boiling range	Approx. 300 °C (572 °F)
g)	Flash point	144 °C (291.2 °F) @ 101.325 kPa
h)	Evapouration rate	no data available
i)	Flammability (solid, gas)	no data available
j)	Upper/lower flammability or explosive limits	no data available
k)	Vapour pressure	0 - 0.016 Pa @ 20 - 50 °C(68-122 °F)

l)	Vapour density	no data available
m)	Relative density	1.1328 g/cm3 at 25 °C (77 °F)
n)	Water solubility	35 mg/L @ 20 °C (68 °F) and pH 3.2 - 4.3
o)	Partition coefficient: n-octanol/water	log Pow: 2.91 @ 25 °C (77 °F) and pH 4.4
p)	Auto-ignition temperature	423 °C (793.4 °F @ 101.325 kPa
q)	Decomposition temperature	no data available
r)	Viscosity, dynamic:	Approx. 800 mPa.s at 23 °C (73.4 °F)
s)	Explosive properties	no data available
t)	Oxidizing properties	no data available

9.2 Other safety information
no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
no data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
no data available

10.4 Conditions to avoid
no data available.

10.5 Incompatible materials
no data available

10.6 Hazardous decomposition products
Other decomposition products - no data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - rat - male and female - > 2,000 mg/kg
(OECD Test Guideline 401)

Inhalation: no data available

Dermal: no data available

no data available

Skin corrosion/irritation
Skin - rabbit
Result: Non-irritant
Method: Draize test

Serious eye damage/eye irritation
Eye - rabbit
Result: Non-irritant
Method: Draize test

Respiratory or skin sensitisation
no data available

Germ cell mutagenicity
no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Additional Information
no data available

RTECS: Not available

Virtually nontoxic after a single ingestion. Inhalation-risk test (IRT): No mortality within 7 hours as shown in animal studies. The inhalation of a highly saturated vapor-air mixture represents no acute hazard.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

Further information
Not dangerous goods

15. REGULATORY INFORMATION

Federal Regulations

Registration status:	Chemical TSCA, US released / listed
OSHA hazard category:	Not hazardous;
EPCRA 311/312 (Hazard categories):	Not hazardous;

16. OTHER INFORMATION

HMIS Rating

Health hazard:	0
Chronic Health Hazard:	
Flammability:	1
Physical Hazard	0

Further information

Unsuitable for use: Food additive(s); cosmetics; feed additive(s)

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Synasia Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.