

SAFETY DATA SHEET

1. IDENTIFICATION OF THE PREPARATION AND COMPANY

Product Name and/or Code: **ANDONOX TLC-88**

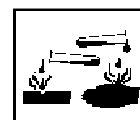
Intended use: Initiator for unsaturated polyester resin.

Name and address of the company: Syrgis Performance Initiators AB
Box 26083
SE-100 41 Stockholm
Sweden

Telephone: +46 8 545 121 60

In case of an emergency: contact tel. +46 8 33 70 43 or National Poison Centre.

2. HAZARDS IDENTIFICATION OF THE PREPARATION



Danger classification: O = Oxidising
C = Corrosive

O

C

May cause fire. Harmful if swallowed. Causes burns.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	EINECS-no	CAS-no	Conc.%	Symbol/R-phrases
Methyl ethyl ketoneperoxide	215-661-2	1338-23-4	25-35	E, C / 2, 22, 34
Tert-Butyl Peroxybenzoate	210-382-2	614-45-9	17-23	O, Xn / 8, 22, 36/38, 44
Dimethyl phthalate	205-011-6	131-11-3	20-35	-
Proprietary phlegmatiser	202-259-7	93-58-3	10-25	Xn / 22
Hydrogen peroxide	231-765-0	7722-84-1	< 1	O, C / 5, 8, 20/22, 35
Methyl ethyl ketone(2-butanone)	201-159-0	78-93-3	< 3	F, Xi / 11,36,66,67
Water			< 1,5	-

For the full R-phrases see section 16.

4. FIRST AID MEASURES

General

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation

Remove to fresh air, keep patient warm and at rest, if breathing is irregular or stopped, administer artificial respiration. Give nothing by mouth. If unconscious, place in recovery position and seek medical advice.

Skin contact

Remove contaminated clothing. Wash skin thoroughly with soap and water.

Eye contact

Remove any contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes holding the eyelids apart and seek medical advice if necessary.

Ingestion

DO NOT INDUCE VOMITING. If the patient is conscious, drink water or milk and rinse the mouth with big amounts of water. Keep at rest. Seek medical advice.

5. FIRE-FIGHTING MEASURES

Flash point:

About 75 °C

Autoignition point:

Not applicable

Fire-fighting:

Water from a safe distance – preferably with a fog nozzle. In case of small fires, other means such as carbon dioxide, foam or dry chemical extinguishers may be effective. In case of fire near storage area, cool the containers with water spray. Dry chemical combined with the product, may re-ignite. Light water additives may be particularly effective at extinguishing fires.

Other information

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not allow run-off from fire fighting to enter drains or watercourses.

Major decomposition products: See section 10.

6. ACCIDENTAL RELEASE MEASURES

Avoid sources of ignition and ventilate the area. Absorb the leak with an inert, non-combustible absorbent material, e.g. sand, earth, perlite or vermiculite. Transfer the material into a clean approved container for proper disposal. Wet the material with water. Wash the contaminated zone. Dike to prevent runoff from entering drains, sewers, streams etc. Avoid skin and eye contact. Wear personal protection equipment recommended in section 8. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.

7. HANDLING AND STORAGE

Handling:

Provide adequate ventilation. Keep containers tightly closed when not in use. Do not use near food or drink. Avoid skin and eye contact. Avoid breathing vapours. Wear personal protection equipment recommended in section 8. Isolate from sources of heat, sparks and open flame. No sparking tools should be used. Preparation may charge electrostatically: always use earthing leads when transferring from one container to another. Dilution is not recommended. Never dilute with acetone.

Storage:

Store in accordance with local regulations. Store in original package, in cool, well ventilated place away from sources of heat, fires, sparks and direct sunlight. For maximum shelf life we recommend to store the product at temperatures not higher than 25°C. At higher temperatures the shelf life will be reduced. For safety reasons the storage temperature should not exceed 35°C. The product should not be stored below 0°C.

The product must never be stored together with accelerators such as dryers, heavy metal compounds etc. Avoid contact with rust. Keep away from sources of ignition. Keep away from oxidising agents, from strongly alkaline and strongly acid materials. Rotate stock using the oldest material first. Prevent unauthorised access.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure control

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Suitable respiratory protection must be worn. Use clean equipment and tools of inert material such as stainless steel, polyethylene, polypropylene and glass. All equipment should be earthed. Use Peleus ball when pipetting the peroxide solutions.

Exposure Limits:

Component	CAS-no.	Swedish Exp.limits / Type	ACGIH / Type
Methyl ethyl ketoneperoxide	1338-23-4	0.2 ppm / C	0.2 ppm / C
Dimethylphtalate	131-11-3	3.0 mg/m ³ / TWA	5 mg/m ³ / TWA
Hydrogen peroxide	7722-84-1	1 ppm / TWA	1 ppm / TWA
Butanone (methylethyl ketone)	78-93-3	50 ppm / TWA	200 ppm / TLV

No EEC-list available.

TWA = Time Waited Average

TLV = Threshold Limited Value

C = Ceiling Limited Value

Respiratory protection

Gas mask with filter A (brown, organic substances) may be necessary.

Hand protection

Use resistant gloves of: butylrubber, ethylen-vinylalcohol, teflon.

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

Eye protection

Use safety eyewear designed to protect against splashes of liquids.

Skin protection

Personnel should wear antistatic clothing made of natural fibre or of high temperature resistant synthetic fibre. All parts of the body should be washed after contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Flash point (°C)	> 75 Method: Seta Flash Closed Cup
Viscosity at 20°C (mPas)	9-14
pH	4 - 7
Free H ₂ O ₂ (%)	< 0,4
Active oxygen (%)	8,7
Density at 20°C (g/cm ³)	1.10 - 1.13
Colour	clear, colourless to slightly yellow
Solubility	Insoluble in water. Soluble in organic solvent

10. STABILITY AND REACTIVITY

Stability

Stable under recommended storage and handling conditions (see section 7). SADT 60°C.

Materials and conditions to avoid:

Violent reactions can occur if the product comes in contact with cobalt accelerators or other peroxide accelerators /promoters, rust, heavy metal compounds, brass, galvanized steel, acetone, reducing or oxidizing agents and strong acids or bases. Therefore these materials must be avoided. Grinding dust and dirt must be avoided as well. Avoid higher temperatures and direct sunlight. Confinement in stainless steel equipments (tanks, vessels, pipes etc) must also be avoided.

Hazardous decomposition products

In a fire, hazardous decomposition products such as smoke, benzoic acid, acetone, tert-butanol, carbon monoxide, carbon dioxide and oxides of nitrogen may be produced.

11. TOXICOLOGICAL INFORMATION

General

There are no data available on the preparation itself.

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache; dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

The liquid splashed in the eyes may cause blindness or serious damage.

Acute toxic effects LD₅₀ /LC₅₀ values

Component / CAS-no	Method	Exposure	Result	Species	Source
MEKP <45% / 1338-23-4	LD50	Oral	484mg/kg	Rat	AIHAAP 19, 205, 1958
MEKP <45% / 1338-23-4	LD50	Oral	470mg/kg	Mouse	JAMAAP 165, 201, 1957
MEKP <45% / 1338-23-4	LC50	Inhalation	200ppm/4h	Rat	AIHAAP 19, 205, 1958
MEKP <45% / 1338-23-4	LC50	Inhalation	170ppm/4h	Mouse	AIHAAP 19, 205, 1958
TBPB / 614-45-9	LD50	Oral	914mg/kg	Mouse	TPKVAL 10,55,1968
TBPB / 614-45-9	LD50	Oral	1012mg/kg	Rat	85GMAT -,30,1982

Skin and eye irritation data

Component / CAS-no	Method	Exposure	Result	Species	Source
MEKP <45% / 1338-23-4		Skin	500mg	Rabbit	AIHAAP 19, 205, 1958
MEKP <45% / 1338-23-4		Eye	3mg	Rabbit	AIHAAP 19, 205, 1958
TBPB / 614-45-9		Skin	500mg/24H	Rabbit	85JCAE -,381,1986
TBPB / 614-45-9		Eye	100mg/1M rinse	Rabbit	ZAARAM 8,25,1958
TBPB / 614-45-9		Eye	500mg/24H	Rabbit	85JCAE -,381,1986

Other information

Tumorigenic Data (Tert-Butyl Peroxybenzoate 98%):

Unreported Route—Mouse TDLo: 311 mg/kg; Tumorigenic(Equivocal tumorigenic agent by RTECS criteria); Blood(Lymphoma, including Hodgkin's disease) .

Chronic effects (Tert-Butyl Peroxybenzoate 98%):

Laboratory experiments have shown mutagenic effects. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

There are no data available on the preparation itself.

Breakdown

tert-butyl peroxybenzoate:

72 % after 28 days (closed bottle test)

Accumulation

tert-butyl peroxybenzoate:

Log Pow: 2,9

Ecotoxicity

tert-butyl peroxybenzoate:

Acute aquatic toxicity:

Fish (Poecilia reclusa): LC50, 96h: 8,6 mg/l

Algae: IC50, 72h: 1,3 mg/

Other information

The product may be harmful to aquatic organisms. Do not discharge the product to sewer or drains.

13. DISPOSAL CONSIDERATIONS

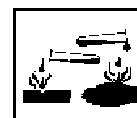
Do not allow into drains or watercourses. Contaminated water and emptied containers should be handled according to local regulations.

The producer recommends destruction of both peroxide rests and empty packaging by combustion under controlled forms.

14. TRANSPORT INFORMATION

Proper Shipping Name: Organic peroxide type D, liquid (Methyl ethyl ketone peroxide)	
UN 3105	Class: 5.2
	Label: 5.2
	Packaging group: II
Marine pollutant: No	EmS: F-J, S-R

15. REGULATORY INFORMATION



O

C

Danger classification: O = Oxidising
C = Corrosive

Contains: Methyl ethyl ketone peroxide
Tert-butyl peroxybenzoate

R phrases

R-7 May cause fire.
R-22 Harmful if swallowed.
R-34 Causes burns.

S phrases

S-3/7 Keep container tightly closed in a cool place.
S-26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S-36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S-50 Do not mix with accelerators, reducing agents, strong acids, alkalis and heavy -metal compounds.

16. OTHER INFORMATION

Tert-Butyl Perbenzoate. Symbol O, Xn

- R-8 Contact with combustible material may cause fire
- R-22 Harmful if swallowed.
- R-36/38 Irritating to eyes and skin.
- R-44 Risk of explosion if heated under confinement.

Methylethylketone peroxide. Symbol E, C

- R-2 Risk of explosion by shock, friction, fire or other sources of ignition
- R-22 Harmful if swallowed
- R-34 Causes burns

Hydrogen peroxide. Symbol O, C

- R-5 Heating may cause an explosion
- R-8 Contact with combustible material may cause fire
- R-20/22 Harmful by inhalation and if swallowed
- R-35 Causes severe burns

Methylethylketone. Symbol F, Xi

- R-11 Highly flammable
- R-36 Irritating to eyes
- R-66 Repeated exposure may cause skin dryness or cracking
- R-67 Vapours may cause drowsiness and dizziness

Proprietary phlegmatiser. Symbol Xn

- R22 Harmful if swallowed

This product is produced in Sweden.