

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Former date 11-Jul-2007

Revision Date 24-May-2012

Version: 1

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### Product identifier

Product name	NORSODYNE O 12335 AL
Chemical Name	Unsaturated polyester resin
Pure substance/mixture	Mixture

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

Sector of use Resins for composites, Contact us before using for food contact application.

## 2. HAZARDS IDENTIFICATION

The mixture is classified as dangerous in accordance with Directive 1999/45/EC.

### Classification of the substance or mixture

Symbol(s) Xn - Harmful

Classification R10 - Xn;R48/20 - Xn;R20 - Xi;R36/37/38 - R43

### Label elements

contains Styrene, Methyl methacrylate

Symbol(s) Xn - Harmful

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**R-phrase(s)**

R10 - Flammable

R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation

R20 - Harmful by inhalation

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

R43 - May cause sensitisation by skin contact

**S-phrase(s)**

S16 - Keep away from sources of ignition - No smoking

S24 - Avoid contact with skin

S33 - Take precautionary measures against static discharges

S37 - Wear suitable gloves

S 7/9 - Keep container tightly closed and in a well-ventilated place.

**Other hazards****Environmental properties** Should not be released into the environment.**3. COMPOSITION/INFORMATION ON INGREDIENTS****Hazardous components**

Chemical Name	EC-No	REACH Registration Number	CAS-No	Weight percent	Classification (67/548)	GHS Classification
Styrene	202-851-5	01-2119457861-3 2	100-42-5	~ 31	R10 Xn; R20 Xn; R48/20 Xn; R65 Xi; R36/37/38	Flam. Liq. 3 (H226) Eye Irrit. 2 (H319) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) STOT SE 3 (H335) STOT RE 1 (H372) Asp. Tox. 1 (H304)
Methyl methacrylate	201-297-1	01-2119452498-2 8	80-62-6	~ 4	F; R11 Xi; R37/38 R43	Flam. Liq. 2 (H225) STOT SE 3 (H335) Skin Irrit. 2 (H315) Skin Sens. 1 (H317)
phthalic anhydride	201-607-5	01-2119457017-4 1	85-44-9	< 1	Xn; R22 Xi; R37/38 Xi; R41 R42/43	Acute Tox. 4 (H302) STOT SE 3 (H335) Resp. Sens. 1 (H334) Eye Dam. 1 (H318) Skin Irrit. 2 (H315) Skin Sens. 1 (H317)

For the full text of the R-phrases mentioned in this Section, see Section 16.

**4. FIRST AID MEASURES****Description of first aid measures****Eye Contact**

Rinse thoroughly with plenty of water, also under the eyelids  
 Keep eye wide open while rinsing  
 If symptoms persist, call a physician

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<b>Skin Contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes If skin irritation persists, call a physician
<b>Inhalation</b>	Move to fresh air If not breathing, give artificial respiration If symptoms persist, call a physician
<b>Ingestion</b>	Do NOT induce vomiting Rinse mouth If symptoms persist, call a physician
<b>Protection of first-aiders</b>	Use personal protective equipment

**Most important symptoms/effects, acute and delayed**

<b>Eye Contact</b>	Irritating to eyes
<b>Skin Contact</b>	Irritating to skin May cause sensitisation by skin contact
<b>Inhalation</b>	Harmful by inhalation Harmful: danger of serious damage to health by prolonged exposure through inhalation Irritating to respiratory system
<b>Ingestion</b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

**Indication of immediate medical attention and special treatment needed, if necessary**

<b>General advice</b>	If symptoms persist, call a physician Show this safety data sheet to the doctor in attendance Do not breathe dust/fume/gas/mist/vapours/spray
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**5. FIRE-FIGHTING MEASURES****Extinguishing media**

**Suitable extinguishing media** Cool containers / tanks with water spray, Dry chemical, Foam, Carbon dioxide (CO<sub>2</sub>)

**Extinguishing Media Which Must not be Used for Safety Reasons** Do not use a solid water stream as it may scatter and spread fire.

**Special hazards arising from the substance or mixture**

**Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases** Vapours may form explosive mixtures with air  
Most vapours are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks)

**Precautions for fire-fighters**

**Special protective equipment for fire-fighters** Wear self-contained breathing apparatus and protective suit.

**Other information** Cool containers / tanks with water spray  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations

**6. ACCIDENTAL RELEASE MEASURES**

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**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Remove all sources of ignition  
Heat, flames and sparks  
Take precautionary measures against static charges  
Ensure adequate ventilation  
Use personal protective equipment

**Environmental precautions**

**Environmental precautions** The product should not be allowed to enter drains, water courses or the soil  
Do not flush into surface water or sanitary sewer system

**Methods and materials for containment and cleaning up**

**Methods for cleaning up** Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13)  
Use clean non-sparking tools to collect absorbed material

**Reference to other sections**

See Section 12 for additional Ecological Information

**7. HANDLING AND STORAGE****Precautions for safe handling**

**Precautions for safe handling** Avoid static electricity build up with connection to earth  
Use only in area provided with appropriate exhaust ventilation  
In case of insufficient ventilation, wear suitable respiratory equipment  
Do not eat, drink or smoke when using this product  
Wear personal protective equipment

**Prevention of fire and explosion** Keep away from open flames, hot surfaces and sources of ignition Do not use compressed air for filling, discharging or handling Empty containers may contain flammable or explosive vapours

**Hygiene measures** When using, do not eat, drink or smoke  
Provide regular cleaning of equipment, work area and clothing

**Conditions for safe storage, including any incompatibilities**

**Technical measures/Storage conditions** Keep in a dry, cool and well-ventilated place  
Keep at temperature not exceeding 30°C  
Keep away from heat and sources of ignition

**Materials to avoid** Strong oxidizing agents, Peroxides

**Packageing material** metallic GRP Tanks (Reinforced Glass Polyester)

**Unsuitable materials for containers** Aluminium copper Copper alloys

**Specific use(s)****8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**Control parameters****Occupational Exposure limits**

Chemical Name	European Union	The United Kingdom	Ireland
Styrene 100-42-5	-	STEL 250 ppm STEL 1080 mg/m <sup>3</sup> TWA 100 ppm TWA 430 mg/m <sup>3</sup>	TWA 20 ppm TWA 85 mg/m <sup>3</sup> STEL 40 ppm STEL 170 mg/m <sup>3</sup>
Methyl methacrylate 80-62-6	-	STEL 100 ppm STEL 416 mg/m <sup>3</sup> TWA 50 ppm TWA 208 mg/m <sup>3</sup>	TWA 50 ppm STEL 100 ppm
phthalic anhydride 85-44-9	-	STEL 12 mg/m <sup>3</sup> TWA 4 mg/m <sup>3</sup> Sen+	TWA 4 mg/m <sup>3</sup> STEL 12 mg/m <sup>3</sup> Sensitizer

**Legend:**

+	Sensitisers
*	Skin designation
**	Hazard Designation
C:	Carcinogen
M:	Mutagen
R:	Toxic to reproduction

**Biological standards**

Chemical Name	European Union	The United Kingdom	Ireland
Styrene 100-42-5	-	We are not aware of any national exposure limit.	We are not aware of any national exposure limit.

**Exposure controls****Occupational exposure controls****Engineering measures**

Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

**Personal protective equipment****General Information**

Use personal protective equipment.

**Respiratory protection**

In case of insufficient ventilation wear suitable respiratory equipment. Breathing apparatus with filter. Type A.

**Eye protection**

Safety glasses with side-shields Do not wear contact lenses

**Skin and body protection**

Antistatic boots. Wear fire/flame resistant/retardant clothing.

**Hand protection**

Impervious gloves Glove material : Neoprene Nitriles Viton (R) Polyvinyl alcohol  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough

**Environmental exposure controls**

**Environmental exposure controls** Do not allow material to contaminate ground water system.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**Information on basic physical and chemical properties**

<u>Property</u>	<u>Values</u>	<u>Remark</u>
Appearance	translucent	
Physical state	Liquid	
Particle size		no data available
Odour	Styrene	
Odour Threshold		no data available
pH		no data available
pH (as aqueous solution)		no data available
Melting point/range		no data available
Freezing point		no data available
Boiling point		no data available
Flash point	31 °C	
Evaporation rate		no data available
Flammability Limits in Air		
upper	-	
lower	-	
Vapour pressure	6 hPa	20°C
Vapour density		no data available
Density	1.12 g/cm <sup>3</sup>	25°C
Water solubility	Insoluble in water	
Partition coefficient: n-octanol/water		no data available
Autoignition temperature		no data available
Decomposition temperature		no data available
Viscosity	330 mPas	25 °C
Explosive properties		
Oxidizing properties		

**Other information**

<u>Property</u>	<u>Values</u>	<u>Remark</u>
Solubility in other solvents	Soluble in most organic solvents	

**10. STABILITY AND REACTIVITY****Reactivity****Chemical stability**

Stability Stable under recommended storage conditions.

**Possibility of hazardous reactions**

Hazardous polymerisation Polymerisation can occur.

**Conditions to avoid**

Conditions to avoid Heat, flames and sparks  
Exposure to light  
Take precautionary measures against static charges

**Incompatible materials**

Materials to avoid Strong oxidizing agents, Peroxides

**Hazardous decomposition products**

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Hazardous decomposition products

Incomplete combustion and thermolysis produces potentially toxic gases such as carbon monoxide and carbon dioxide

**11. TOXICOLOGICAL INFORMATION****Information on toxicological effects****Acute toxicity Product Information**

**Inhalation** Harmful by inhalation. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Irritating to respiratory system.

**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

**Local effects**

**Inhalation** Harmful by inhalation Harmful: danger of serious damage to health by prolonged exposure through inhalation Irritating to respiratory system

**Skin Contact** Irritating to skin  
May cause sensitisation by skin contact

**Eye Contact** Irritating to eyes

**Sensitisation**

**Inhalation** None

**Skin Contact** May cause sensitisation by skin contact.

**Chronic toxicity**

**Target Organ Effects** Central nervous system (CNS). Reproductive System. Respiratory system. Eyes. Liver. Skin.

**Specific effects**

**Carcinogenicity** Animal testing did not show any carcinogenic effects.

**Mutagenic Effects** Animal testing did not show any mutagenic effects

**Reproductive toxicity** Animal testing did not show any effects on fertility

**Developmental Toxicity** Animal studies did not show statistically significant developmental toxicological effects.

**Acute toxicity - Component Information**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Styrene	> 2000 mg/kg (Rat)		11.8 mg/L (Rat) 4 h
Methyl methacrylate	7872 mg/kg ( Rat )	5 g/kg ( Rabbit )	400 ppm ( Rat ) 1 h 4632 ppm ( Rat ) 4 h
phthalic anhydride	1530 mg/kg bw (Rat)	> 3160 mg/kg bw (Rabbit)	2.14 mg/L (Rat) 4 h

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances
Styrene	Group I Chemical	High Exposure Concern

**12. ECOLOGICAL INFORMATION****Toxicity**

Do not flush into surface water or sanitary sewer system.

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates.	Toxicity to fish	Toxicity to microorganisms
Styrene 100-42-5	LC50 Algae 72h 4.9 mg/L	EC50 Daphnia magna 48h 4.7 mg/L	LC50 Fish 96h 4.02 - 10 mg/L	

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Methyl methacrylate 80-62-6	EC50 Pseudokirchneriella subcapitata 96h 170mg/L	EC50 Daphnia magna 48h 69mg/L	LC50 Pimephales promelas 96h 125.5-190.7mg/L LC50 Lepomis macrochirus 96h 153.9-341.8mg/L LC50 Lepomis macrochirus 96h 170-206mg/L LC50 Pimephales promelas 96h 243-275mg/L LC50 Poecilia reticulata 96h 326.4-426.9mg/L LC50 Oncorhynchus mykiss 96h 79mg/L	
phthalic anhydride 85-44-9		EC50 Daphnia magna 48h > 640 mg/L	LC50 Fish 7d 560 mg/L (Brachydanio rerio)	

**Persistence and degradability**

No information available.

**Bioaccumulative potential**Partition coefficient:  
n-octanol/water

Chemical Name	log Pow
Styrene - 100-42-5	3
Methyl methacrylate - 80-62-6	0.7
phthalic anhydride - 85-44-9	1.6

**Mobility in soil**

No information available.

**Results of PBT and vPvB assessment**

No information available.

**Other adverse effects**

None known.

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods**

Waste from Residues/Unused Products Dispose of in accordance with the European Directives on waste and hazardous waste.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

Other information According to the European Waste Catalogue, Waste Codes are not product specific, but application specific  
Waste codes should be assigned by the user based on the application for which the product was used**14. TRANSPORT INFORMATION****ADR/RID**

UN-No	UN1866
Hazard class	3
Proper shipping name	Resin solution
Packing group	III



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Classification Code	F1
Tunnel restriction code	(D/E)
ADR Hazard Id (Kemmler Number)	30
Description	UN1866, RESIN SOLUTION, 3, PG III, (D/E)
Limited quantity	LQ7

**IMDG/IMO**

UN-No	UN1866
Hazard class	3
Proper shipping name	Resin solution
Packing group	III
Marine pollutant	NP
EmS	F-E, S-E
Description	UN1866, RESIN SOLUTION, 3, PG III, (31°C c.c.)
Limited quantity	5 L

**ICAO/IATA**

UN-No	UN1866
Hazard class	3
Packing group	III
ERG Code	3L
Description	UN1866, RESIN SOLUTION, 3, PG III
Limited quantity	10 L

**ADN**

UN-No	UN1866
Hazard class	3
Packing group	III
Classification Code	F1
Special Provisions	640E
Description	UN1866, RESIN SOLUTION, 3, PG III
Limited quantity	LQ7
Ventilation	VE01

**15. REGULATORY INFORMATION**

The mixture is classified as dangerous in accordance with Directive 1999/45/EC.

**Safety, health and environmental regulations/legislation specific for the substance or mixture****European Union**

Chemical Name	96/82/EC (SEVESO) - §9	96/82/EC (SEVESO) - §6, §7
Styrene - 100-42-5	50000	5000 tonne 50000 tonne

**National regulatory information****The United Kingdom**

Avoid exceeding of the given occupational exposure limits (see section 8).

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**Ireland**

Avoid exceeding of the given occupational exposure limits (see section 8).

**Chemical Safety Assessment**

No information available

**16. OTHER INFORMATION****Full text of R-phrases referred to under sections 2 and 3**

R10 - Flammable

R20 - Harmful by inhalation

R65 - Harmful: may cause lung damage if swallowed

R11 - Highly flammable

R43 - May cause sensitisation by skin contact

R41 - Risk of serious damage to eyes

R22 - Harmful if swallowed

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

R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation

R37/38 - Irritating to respiratory system and skin

R42/43 - May cause sensitisation by inhalation and skin contact

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Revision Note not applicable

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

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE PREPARATION AND COMPANY

**Product Name and/or Code:** **ANDONOX KP-9**

**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



May cause fire. Harmful if swallowed. Causes burns.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	EINECS-no	CAS-no	Conc. %	Symbol/R-phrases
Methyl ethyl ketone peroxide	215-661-2	1338-23-4	30-40	E, C / 2, 22, 34
Dimethyl phthalate	205-011-6	131-11-3	35-45	none
Proprietary phlegmatiser	202-259-7	93-58-3	15-25	Xn / 22
Hydrogen peroxide	231-765-0	7722-84-1	< 2	O, C / 5, 8, 20/22, 35
Methyl ethyl ketone(2-butanone)	201-159-0	78-93-3	< 1.5	F, Xi / 11,36,66,67
Water			< 1,5	None

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:**

Irrigate copiously with clean, fresh water for at least 15 minutes, alternate 2% NaCO<sub>3</sub>, holding the eyelids apart and seek medical advice if necessary.

### **Ingestion:**

If accidentally swallowed obtain immediate medical attention. Keep at rest. Drink water or milk, and **DO NOT** induce vomiting.

## 5. FIRE-FIGHTING MEASURES

This peroxide is hard to ignite but will burn vigorously with acceleration. Use Water from a safe distance – preferably with a water-fog nozzle. For very small fires, an extinguisher with carbon dioxide, foam or dry chemical may be effective. In case of a fire in or near a storage area, cool stored containers with water spray.

### **Recommendations:**

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.

Decomposition products see section 10.

## 6. ACCIDENTAL RELEASE MEASURES

Avoid sources of ignition and ventilate the area. Avoid breathing vapours. 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 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

### Engineering Measures.

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Use clean equipment and tools of inert material such as stainless steel, polyethylene, polypropylene, 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
Methylethyl ketone peroxide	1338-23-4	0.2 ppm / C	0.2 ppm / C
Dimethylphtalate	131-11-3	3.0 mg/m <sup>3</sup> / TWA	5 mg/m <sup>3</sup> / 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

### Personal Protection.

#### Respiratory protection:

Is required if the limit like TLV are exceeded. 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.

Last Changed: 17 September 2009

Product name: ANDONOX KP-9

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Replaces: 22 January 2009

**Eye protection:**

Use safety eyewear designed to protect against splash of liquids. Splashes in the eyes may cause serious eye damage.

**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

<b>Physical state</b>	Liquid
<b>Flash point (°C)</b>	> 80      Method: Seta Flash
<b>Viscosity at 20°C (mPas)</b>	9-15
<b>pH</b>	4 – 7
<b>Active oxygen (%)</b>	9.0 - 9.2
<b>SADT °C</b>	60
<b>Density at 20°C (g/cm<sup>3</sup>)</b>	1.12 - 1.15
<b>Colour</b>	clear, colourless
<b>Solubility in water</b>	Immiscible

## 10. STABILITY AND REACTIVITY

**Stability:**

Stable when kept in original, closed container, out of direct sunlight at temperatures below 35°C. Decomposition of product due to heat or contamination may lead to fire or strong explosions. SADT 60 °C.

**Hazardous reactions:**

Self-decomposition is catalysed by substances such as acids, strong bases, tert-amines, Friedel-Crafts catalysts and heavy metals.

**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.

**Decomposition and combustion products:**

Carbon dioxide, Water, Acetic acid, Formic acid, Propanoic acid.

## 11. TOXICOLOGICAL INFORMATION

There are no data available on the preparation itself.

**Irritation data(Methyl ethyl ketone peroxide <45%):**

Skin(rabbit)	500mg	AIHAAP 19, 205, 1958
Eye(rabbit)	3mg	AIHAAP 19, 205, 1958

**Toxicity data(Methyl ethyl ketone peroxide <45%):**

Oral (rat) LD-50	484mg/kg	AIHAAP 19, 205, 1958
Oral (mouse) LD-50	470mg/kg	JAMAAP 165, 201, 1957
Inhalation(rat) LC-50	200ppm/4h	AIHAAP 19, 205, 1958
Inhalation(mouse) LC-50	170ppm/4h	AIHAAP 19, 205, 1958

**Toxicity effects:**

This product is extremely irritant for the eyes, just a few drops of it might cause irreversible lesion and permanent injury of the cornea. If there is a skin contact, it might cause irritation, skin-rash, swelling and chapping. The inhalation of its vapours causes cough, headache and irritation of the respiratory-system. Swallowing causes strong irritation and burn of throat and stomach. Perforations of the mucous membranes might occur and, according to its quantity, it might also cause the death of the injured person. The organic peroxides are dangerous for the organism since the peroxide oxygen is reduced to radical that induces into the cellular metabolism.

**Skin contact:**

Strongly irritant. Causes burns

**Eyes contact:**

Strongly irritant, corrosive.

**Ingestion:**

Harmful

**Cancerogenic-Mutagenic-Reproductive effects:**

No evidence of these effects has been reported.

**12. ECOLOGICAL INFORMATION**

Methyl ethyl ketone peroxide 33%

Ecotoxicity

Fish acute toxicity, LC50 (96h) 44,2 mg/l (Poecilia reticulata)

Bacteria EC50 48 mg/l

Readily biodegradable (closed bottle test)

Dimethylphthalate

Ecotoxicity

Algae Selenastrum capricornutum, IC50 (96h) 39,8 mg/l

Methyl ethyl ketone

Ecotoxicity

Fish acute toxicity, LC50 (96h) 3,22 mg/l (Lepomis macrochirus)

Bacteria EC50 48 mg/l

Readily biodegradable (closed bottle test)

This product is readily biodegradable and it's not toxic to aquatic organisms.

### 13. DISPOSAL CONSIDERATIONS

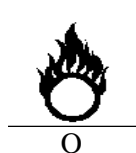
Do not allow into drains or water courses. Water and emptied containers should be handled according to local regulations.

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

### 14. TRANSPORT INFORMATION

<b>Proper Shipping Name:</b> Organic peroxide type D, liquid, (methyl ethyl ketone peroxide)	
UN 3105	<b>Class:</b> 5.2
	<b>Label:</b> 5.2
	<b>Packing group:</b> II
<b>Marine pollutant:</b> No	<b>EmS:</b> F-J, S-R

### 15. REGULATORY INFORMATION



**Danger classification:** O = Oxidising  
C = Corrosive

**Contains:** Methyl ethyl ketone peroxide

**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

In addition from section 2:

Methylethylketone peroxide. Symbol E, C

- R2 Risk of explosion by shock, friction, fire or other sources of ignition
- R22 Harmful if swallowed
- R34 Causes burns

Hydrogen peroxide. Symbol O, C

- R5 Heating may cause an explosion.
- R8 Contact with combustible material may cause fire
- R20/22 Harmful by inhalation and if swallowed.
- R35 Causes severe burns.

Methylethylketone. Symbol F, Xi

- R11 Highly flammable
- R36 Irritating to eyes
- R66 Repeated exposure may cause skin dryness or cracking
- R67 Vapours may cause drowsiness and dizziness

Proprietary phlegmatizer. Symbol Xn

- R22 Harmful if swallowed

This product is produced in Sweden.