

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Name of the preparation: ANDONOX CHM-30

Product Name: ANDONOX CHM-30

Intended use: Initiator for unsaturated polyester resin. Industrial and professional use.

Name and address of the company: United Initiators AB
Engelbrektsgatan 43B
SE-114 32 Stockholm
Sweden

Telephone: +46 8 545 121 60

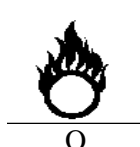
Information about the Safety Data Sheet: info@united-in.com

Emergency telephone: +46 8 33 70 43 or National Poison Centre.

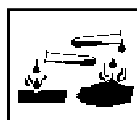
2. HAZARDS IDENTIFICATION

EC

Danger classification:



O



C



N

O = Oxidising
C = Corrosive
N = Dangerous for the environment

R phrases:

R-7 May cause fire.
R-34 Causes burns.
R-48/20/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
R-51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S phrases:

S-3/7 Keep container tightly closed in a cool place.
S-36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S-45 In case of accident or if you feel unwell, seek medical advice immediately (show the label if possible)

- S-50** Do not mix with accelerators, reducing agents, strong acids, alkalis and heavy metal compounds.
- S-61** Avoid release to the environment. Refer to special instructions/Safety data sheets.

3. COMPOSITION / INFORMATION ON INGREDIENTS

No	Component	EINECS-no	CAS-no	Conc.% w/w
1	Dimethyl phthalate	205-011-6	131-11-3	40-45
2	Methylacetoacetate	203-299-8	105-45-3	25-30
3	Cumyl hydroperoxide	201-254-7	80-15-9	22-24
4	Cumene	202-704-5	98-82-8	3-6
5	2-Phenylpropan-2-ol	210-539-5	617-94-7	≤ 2
6	Acetophenone	202-708-7	98-86-2	≤ 1

No	Components/Registration number	Classification CLP	Classification EC
1	Dimethyl phthalate	None	None
2	Methylacetoacetate	Eye Irrit Cat 2, H319	Xi /36
3	Cumyl hydroperoxide	Organic Peroxide Type F Acute Tox Cat 3 inhalation, Acute Tox Cat 4 oral, Acute Tox Cat 4 dermal, eye irritation Cat 1, Skin corrosion Cat 1B, STOT RE (i) (o) Cat 2, Aquatic ac. Env chron Cat 2 H242, H302, H312, H314, H331, H373, H411	O, T, N / 7-21/22-23-34- 48/20/22-51/53
4	Cumene	Asp Tox 1, Aquatic ac, STOT SE 3, Env chron Cat 2 H226, H304, H335, H411	Xn, N / 10-37-51/53-65
5	2-Phenylpropan-2-ol	Skin irrit Cat 2, Eye irrit. Cat 2, STOT SE 3 H315, H319, H335	Xi / 36/37/38
6	Acetophenone	Acute Tox Cat 4 oral, Eye irrit Cat 2 H302, H319	Xn / 22-36

See also 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. Skin contact can cause skin corrosion.

Eye contact:

Irrigate copiously with clean, fresh water for at least 15 minutes holding the eyelids apart and seek medical advice if necessary. Eye contact can cause irreversible eye damage or eye corrosion.

Ingestion:

If accidentally swallowed obtain immediate medical attention. Keep at rest. Drink water or milk, and **DO NOT** induce vomiting. Ingestion can cause damage, corrosion of gullet and stomach.

5. FIRE-FIGHTING MEASURES

General information: This peroxide burn vigorously with acceleration. Fire will produce dense black smoke. Toxic fumes may be released. Exposure to decomposition products may cause a health hazard. Caution: Reigniting may occur.

Recommended extinguishing media: Water spray 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.

Unsuitable extinguishing media: Water jet.

Recommendations: Use suitable respiratory protection. Wear resistant protective clothing and foot wear. 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

Personal precautions: Avoid breathing vapours. Avoid skin and eye contact. Wear personal protection equipment recommended in section 8.

Environmental precautions: Contain any fluid that runs out using inert non-combustible material e.g. sand, earth, vermiculite. Dike to prevent runoff from entering drains, sewers, streams etc. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.

Methods and material for cleaning up: 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.

Further information: Avoid sources of ignition and ventilate the area.

7. HANDLING AND STORAGE

Handling:

Precautions for safe handling: Provide adequate ventilation. Keep containers tightly closed when not in use. Avoid skin and eye contact. Avoid breathing vapours. Wear personal protection equipment recommended in section 8. Emergency shower and equipment for rinsing eyes must be available. Do not use near food or drink. Wash the hands thoroughly after handling or contact.

Precautions against fire and explosions: 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. 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. Dilution is not recommended. Never dilute with acetone.

Storage:

Conditions for storage rooms and vessels: 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. Rotate stock using the oldest material first. Prevent unauthorized access.

Avoid storage of incompatible materials: 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 oxidizing agents, from strongly alkaline and strongly acid materials.

Further information for storage: Store in original package. Rotate stock using the oldest material first. Prevent unauthorized access.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Limits:

Component	CAS-no.	Swedish Exp.limits / Type	ACGIH / Type
Cumene	98-82-8	25 ppm / TLV	50 ppm / TLV
Dimethylphtalate	131-11-3	3.0 mg/m ³ / TWA	5 mg/m ³ / TWA

TWA = Time Waited Average

TLV = Threshold Limited Value

General protection and hygiene measures: Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Do not eat or drink when handling.

Personal Protection equipment:

Respiratory protection: Is required if the limit like TWA or TLV are exceeded. Gas mask with filter A (brown, organic substances) or positive pressure self contained breathing apparatus.

Hand protection: Use resistant gloves of: butyl rubber, neoprene, ethylen-vinylalcohol, teflon.

Eye protection: Use safety eyewear designed to protect against splash of liquids. Splashes in the eyes may cause serious eye damage. Emergency eye rinsing equipment must be available.

Skin protection: Wear antistatic clothing made of natural fibre or of high temperature resistant synthetic fibre. All parts of the body should be washed after contact.

Further information: Observe the information in section 7.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Flash point (°C)	>65°C (closed cup)
Melting point (°C)	-
Boiling point (°C)	N/A
Density at 20°C (g/cm ³)	1.09
Viscosity at 20°C (mPas)	8-15
Vapour density (Air=1)	>3
Vapour pressure (kPa)	-
Odour	sharp, aromatic odour
Odour threshold	25 ppm as Cumene
Colour	Pale yellow
Solubility	Soluble in aldehydes, ketones, esters
Solubility in water (g/l)	Slightly
Partition coefficient (log Pow)	-

10. STABILITY AND REACTIVITY

Stability: **Stable** when kept in original, closed container, out of direct sunlight at temperatures below 35 °C. SADT (Self Accelerating decomposition temperature): above 55°C. Contact with incompatible material can cause decomposition below SADT. Decomposition of product due to heat or contamination may lead to fire or strong explosions.

Conditions to avoid: Temperatures over 25 °C and storage in direct sunlight. Confinement in stainless steel equipments (tanks, vessels, pipes etc.)

Materials to avoid: Incompatible materials such as acids, strong bases, tert-amines, Friedel-crafts catalysts, heavy metals, cobalt accelerators or other peroxide accelerators or promoters, rust, brass, galvanized steel, acetone, reducing or oxidizing agents, grinding dust and dirt.

Decomposition and combustion products: Acetophenone, acetone, phenol, dimethylphenylcarbinol, CO, CO₂.

11. TOXICOLOGICAL INFORMATION

General information: Toxic if inhaled, corrosive, causes burns, harmful if swallowed. Damage to kidney and liver.

Skin contact: Causes severe skin burns

Eyes contact: Causes severe eye damage. Just a few drops of it might cause irreversible lesion and permanent injury of the cornea.

Inhalation: Toxic

Ingestion: Harmful

Sensitizing: Based on available data the classification criteria is not met.

Genotoxicity: Based on available data the classification criteria is not met.

Specific target organ toxicity: May cause damage to organs through prolonged or repeated exposure.

Toxicological tests:

Dimethyl phthalate:

LD-50 oral rat: >2400 mg/kg
LD-50 dermal rabbit: >10000 mg/kg
LC-50 inhalation: 9300 mg/m³, (6,5h)

Methylacetoacetate

LD50 oral rat: 3228 mg/kg
LD50 dermal rabbit: >5000 mg/kg
LC50 inhalation rat: >6,6 mg/l (4h)

Cumene hydroperoxide

LD50 oral rat: 382 mg/kg
LD50 dermal rat: 134 mg/kg
LC50 inhalation rat: 1370 mg/m³

Cumene

LD50 oral rat: 2260 mg/kg
LD50 dermal rabbit: >3160 mg/kg
LC50 inhalation rat: >17600 mg/m³ (6h)

12. ECOLOGICAL INFORMATION

The product should not be allowed to enter drains of water courses. This product is **not** easily biodegradable. It's toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

Dimethyl phthalate:

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

Methylacetoacetate

Toxicity:

LC50 fish: 250 mg/l (48h) (*Leuciscus idus*)

EC50 daphnia: 400 mg/l (48h) (*Daphnia Magna*)

IC50 Algae: >978 mg/l (72h)

EC10 Bacteria: >500 mg/l (24h)

Persistence and degradability:

>90% biodegradation /2 days (BOD test). Easily biodegradable.

Bioaccumulation potential:

Log Pow: -0,11 (estimated)

PBT and vPvB not applicable.

Cumyl hydroperoxide

Toxicity:

LC50 fish: 3,9 mg/l (96h) (*Oncorhynchus mykiss*)

EC50 daphnia: 18,8 mg/l (48h) (*Daphnia Magna*)

Bioaccumulation potential:

Log Pow: 2,16

Mobility in soil: Low mobility

Log Koc: 3,37

The product does not meet the PBT and vPvB classification criteria.

Cumene

Toxicity:

LC50 fish: 4,8 mg/l (96h) (*Oncorhynchus mykiss*)

LC50 other aquatic organisms: 4,7 mg/l (96h) (*Cyprinodon variegatus*)

EC50 daphnia: 1,2 mg/l (48h) (*Daphnia Magna*)

NOEC (acute): 1,49 mg/l (72h) (*Desmodesmus subspicatus*)

NOEC (chronic): 0,38 mg/l (28d) (*Danio rerio*)

ErC50 (algae): 2,01 mg/l (72h) (*Desmodesmus subspicatus*)

Persistence and degradability:

2% biodegradation /60 days (BOD test). Not readily biodegradable.

Bioaccumulation potential:

BCF: 94,69 (calculated value)

Log Pow: 3,5

Bioaccumulation unlikely.

Mobility in soil:

Log Koc: 2,94 (20 °C)

Ecology – soil: Adsorbs into the soil. Highly volatile (H=1010,8 Pa.m³/mol, 20 °C)

The product does not meet the PBT and vPvB classification criteria.

13. DISPOSAL CONSIDERATIONS

Product: Do not allow into drains or water courses. Product waste is considered as dangerous waste and should be disposed in accordance to local regulations.

Contaminated packaging: Emptied containers should be handled as dangerous waste according to local regulations. The producer recommends destruction of both peroxide rests and empty packaging by combustion under controlled forms.

14. TRANSPORT INFORMATION

Land transport, ADR:

UN number: 3109

Class: 5.2

Classification code: P1

Proper shipping name: Organic Peroxide Type F, Liquid (Cumyl Hydroperoxide)

Tunnel code: D

Label: 5.2

Sea transport, IMDG:

UN number: 3109

Class: 5.2

Packing group: II

Proper shipping name: Organic Peroxide Type F, Liquid (Cumyl Hydroperoxide)

Label: 5.2

EMS: F-J, S-R

Marine pollutant: No

Air transport, IATA-DGR:

UN number: 3109

Class: 5.2

Packing group: II

Proper shipping name: Organic Peroxide Type F, Liquid (Cumyl Hydroperoxide)

Label: 5.2

15. REGULATORY INFORMATION

Regulatory information: Substance listed in 96/82/EC.

No additional information available.

16. OTHER INFORMATION

In addition from section 2 and 3:

R-7	May cause fire
R-10	Flammable
R-21/22	Harmful in contact with skin and if swallowed
R-22	Harmful if swallowed
R-23	Toxic by inhalation
R-34	Causes burns
R36	Irritating to eyes
R36/37/38	Irritating to eyes/respiratory system and skin
R37	Irritating to respiratory system
R-48/20/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed
R-51/53	Toxic to aquatic organisms, may cause long-term adverse effects in aquatic environment
R-65	Hazard. May cause lung damage if swallowed.
H226	Flammable liquid and vapour
H242	Heating may cause a fire
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H316	Causes serious eye irritation
H331	Toxic if inhaled
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

Version 1:3

Last Changed: 06 December 2012

Replaces: 28 November 2012