

**1. PRODUCT AND COMPANY IDENTIFICATION**

Commercial name: **PROMOX P300**  
Chemical name: Acetyl Acetone peroxide

Intended use: Industrial – Polymerization of unsaturated polyester resins.

Manufacturer/Supplier: PROMOX SRL Via A. Diaz, 22/a 21038 Leggiano (VA)  
tel. +39/ 0332/ 648380 fax +39/0332/ 648105 e-mail [info@promoxide.com](mailto:info@promoxide.com)

Emergency telephone: In the case of any accidental contact, call:  
"CENTRO ANTI-VELENI" di MILANO TEL. +39/02/66101029  
PROMOX SRL TEL. +39/0332/648380

**2. COMPOSITION/INFORMATION ON THE COMPONENT**

<b>ACETYL ACETONE PEROXIDE</b>				<b>20 - 30 % w/w</b>			
CAS N.	37187-22-7	UN N.	3105	EINECS (CE)	253-384-9	Index n°	n.d.
Symbol(s) : O, Oxidizing; Xi, Irritant				Risk-phrase(s): R7, R36			
<b>DIACETONE ALCOHOL</b>				<b>50 - 75 % w/w</b>			
CAS N.	123-42-2	UN N.	1148	EINECS (CE)	204-626-7	Index n°	603-016-00-1
Symbol(s) : Xi, Irritant				Risk-phrase(s): R36			
<b>HYDROGEN PEROXIDE</b>				<b>01 - 05% w/w</b>			
CAS N.	7722-84-1	UN N.	2015	EINECS (CE)	231-765-0	Index n°	008-003-00-9
Symbol(s) : C, Corrosive; O, Oxidizing				Risk-phrase(s): R5, R8, R20/22, R35			

**3. PRODUCT HAZARD IDENTIFICATION**

Hazard symbols: O Oxidizing; Xi Irritant

Risk-phrases: R7, R36/38. For other information see section 15.

Principal risk: It may cause fire. Irritating to eyes and skin.

Health effects - eye: Contact with eyes causes injury to the cornea and eyelids.

Health effects - skin: Contact with skin causes burns.

Health effects – ingestion: Swallowing causes corrosion to oral cavity, pharynx and to alimentary canal.

Health effects – inhalation: Reduced inhalation risk.

Environmental effects: n.d.

**4. FIRST AID MEASURES**

First aid – eyes: Wash immediately with plenty of running keeping the eyelid always far from the eye. Immediately take the injured person to an oculist. Do not treat injured eyes with any ointments or oils.

First aid - skin: Remove the accidentally contaminated clothes immediately, wash any affected skin area with plenty of lukewarm water and soap. Should there be persistent skin reddening or irritation, take the injured person to the nearest first-aid post for burns treatment.

First aid - ingestion: Do not induce vomiting. Rinse mouth with water and immediately take him to the nearest first-aid post.

First aid - inhalation: Take the injured person away from the contaminated area. If the injured person shows any signs of breathing-insufficiency, give artificial respiration by means of a self-expanding balloon mask (AMBU). Immediately take the injured person to the nearest first-aid post.

**5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media	Always use water as an extinguisher, preferably broken up, keeping windward and at a safe distance. Cool down both the containers which have been involved in the fire and the surrounding area. Do not start cleaning the area or salvaging the goods before the whole area has completely cooled down. In case of product decomposition, this is detectable by the formation of fumes and by containers overheating, cools down with water.
Unsuitable extinguishing media	Halones.
Special hazards	The fire can resume if it does not cool it. Decomposition may occur under effect of heating. The oxygen developed during the decomposition phase may support the combustion.
Protective equipment	Wear suitable protective clothing. Wear self contained breathing apparatus, see section 8.
Other information	Extinguish a small fire with powder or carbon dioxide then apply water to prevent re-ignition. Cool closed containers with water.

**6. ACCIDENTAL RELEASE MEASURES**

Personal precautions	Eliminate the ignition sources. Do not breathe fumes/vapour. Avoid contact with skin and eyes. During the operation use the individual protective devices, see section 8.
Environmental precautions	Do not allow to enter drains or water courses. Cover the remainder with inert absorbent (e.g. vermiculite) for disposal. Advise competent authority.
Methods for cleaning up	Collect as much as possible in a clean container for (preferable) reuse or disposal. Never try to recover the discharged product, or reintroduce it into its original containers. After the pick up of the product, clean the affected area with water, avoiding excessive waste dispersion and neutralize with soda or lime.

**7. HANDLING AND STORAGE**

Handling	During the operation use the individual protective devices. see section 8. Do not allow operators to use naked flames, to produce sparks or to smoke inside the rooms where the product is handled and stored. Do not breathe fumes/vapours. Do not compound/pollute with other substance which can cause decomposition. The containers used to collect and pour out the product are to be kept scrupulously clean, avoiding peroxide refilling into its original container.
Storage	Keep the product: -in observance with the local rules; -in the original closed containers; -away from sources of ignition (steam lines, naked flames, sparks, direct sunlight, etc.); -away from other inflammable materials.  In order to keep the product characteristics unaltered for a long time, store in a cool, well-ventilated position.
Other information	The materials which can bear the contact with peroxides, and which are consequently suitable for the construction of peroxides containers, dispensers, etc., are: glass or ceramic, polyethylene, AISI 304 or 316 stainless steel, pickled and passivated.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Limit value for exposure to single components of the product.**

ACETYL ACETONE PEROXIDE	ACGIH	-	TLV-TWA	mg/m3	n.d.
DIACETONE ALCOHOL	ACGIH	-	TLV-TWA	mg/m3	238
HYDROGEN PEROXIDE	ACGIH	-	TLV-TWA	mg/m3	1.4

**Exposure controls and personal protection device.**

The personal protection devices vary according to possible exposure and danger of the work conditions.

Engineering controls	The working area shall be provided with suitable ventilation system in order to keep the product concentration rate in the air at a low level.
Respiratory protection	In case of emergency wear suitable respiratory equipment (respirator with filter A).
Hand protection	Wear suitable protective gloves of neoprene or synthetic rubber.
Eye protection	Wear eye/face protection during pouring.
Skin protection	When high shoot out risks occur, rubber booths and waterproof clothes must be worn.

**9. PHYSICAL AND CHEMICAL PROPERTIES****General information**

<i>Characteristic</i>	<i>Unit of measure</i>	<i>Declared value</i>
Appearance	-	Liquid, clear
Colour	-	Colourless
Odour	-	Distinctive

**Important information about human health and environmental safety**

<i>Characteristic</i>	<i>Unit of measure</i>	<i>Declared value</i>
pH (in aqueous solution)	-	Acid
Boiling point/ interval	°C	100°C decomposes
Flash point (open cup)	°C	> SADT value
Flash point (closed cup)	°C	> SADT value
Flammability ASTM D-4206-96(2001)	-	Not support the combustion
Explosive properties	-	No
Oxidizing properties	-	Not applicable
Vapour pressure	-	Not determined
Relative density UNI EN ISO 12185-00	d 20/20	1,030
Solubility in water	-	Partly soluble
Liposolubility	-	Soluble in polar solvents
Partition coefficient	-	Not determined
Viscosity at 20 °C ISO UNI EN 3104	mPa.s	14
Steam density	air=1	>1
Evaporation velocity	-	Not determined

**Other information**

<i>Characteristic</i>	<i>Unit of measure</i>	<i>Declared value</i>
Auto ignition	°C	Not determined
Melting point/ interval	°C	< - 20
SADT (Self Accelerated Decomposition Temperature)	°C	> 60
Active oxygen content	%	4.1
Solubility in other solvents	-	See section 10

**10. STABILITY AND REACTIVITY**

Stability	The product is stable under normal storage conditions. Product decomposition is detected by temperature increase and fumes emission. The oxygen developed during the decomposition phase, in case of fire may support the combustion of flammable products.
Conditions to avoid	It can rapidly decompose if heated or mixed with other incompatible chemical compounds. It is therefore necessary to avoid the product coming into contact with all kinds of metallic salts; acids and alkalis, especially if in a concentrated form; any reducers and all organic and flammable compounds. Store in a well ventilated place away from sources of heat and direct sunlight.
Material to avoid	To use only compatible materials, see section 7.
Decomposition products	The main products of the decomposition process are: oxygen, carbon dioxide, water, acetic acid.

**11. TOXICOLOGICAL INFORMATION**

The experimental product toxicity data reported by specific literature, are as follows:

**ACETYL ACETONE PEROXIDE**

Acute toxicity – Ingestion	LD50 oral - (lethal dose rat)	2870 mg/Kg
Acute toxicity – Inhalation	LC50 (lethal concentration rat)	> 1h in saturated space
Acute toxicity – Dermal	LD50 (lethal dose rat)	1370 mg/Kg
Eye irritation	(rabbit)	Moderately irritant
Skin irritation	(rabbit)	Lightly irritant
Genotoxicity “in vitro” (Ames test)		n.d.
Skin sensitization		n.d.

**DIACETONE ALCOHOL**

Acute toxicity – Oral	LD50 oral - (lethal dose rat)	> 4000 mg/Kg
Acute toxicity - Inhalation	LC50 (lethal concentration rat)	1500 ppm/8h
Acute toxicity - Dermal	LD50 dermal - (lethal dose rat)	> 2000 mg/Kg
Eye irritation	(rabbit)	irritant
Skin irritation	(rabbit)	Moderately irritant
Genotoxicity “in vitro” (Ames test)		Negative
Skin sensitization		Not sensitizing

**HYDROGEN PEROXIDE 35% solution**

Acute toxicity - Oral	LD50 oral - (lethal dose rat)	1232 mg/Kg
Acute toxicity - Inhalation	LC50 (lethal concentration rat)	2 mg/l/4h (100%)
Acute toxicity - Dermal	LD50 (lethal dose rat)	> 2000 mg/Kg
Eye irritation	(rabbit)	Extremely irritant
Skin irritation	(rabbit)	Irritant
Genotoxicity “in vitro” (Ames test)		Positive
Genotoxicity “in vivo”		Negative
Skin sensitization		Not sensitizing

**12. ECOLOGICAL INFORMATION**

Use this product appropriately and avoid product dispersion in the environment.

The available ecotoxicity data about single components of the preparation, are as follows:

**ACETYL ACETONE PEROXIDE**

Acute toxicity TTC bacteria ( <i>pseudomonas putida</i> 16h)	67 mg/l
Acute toxicity EC50 crustaceans ( <i>daphnia magna</i> 24h)	40 mg/l
Acute toxicity LC50 fish ( <i>carassius auratus</i> 96h)	121 mg/l
Mobility	Air - poorly volatile Water - partly soluble, evaporate with difficulty Soil - n.d.
Persistence and degradation	Rapidly biodegradable
Bioaccumulation potential (log pow)	Not bioaccumulable – log Pow=< 1

**DIACETONE ALCOHOL**

Acute toxicity EC3 bacteria ( <i>pseudomonas putida</i> 16h):	825 mg/l
Acute toxicity EC50 crustaceans ( <i>daphnia magna</i> 24h)	9000 mg/l
Acute toxicity LC50 fish ( <i>leuciscus idus</i> 48h)	8930 mg/l
Mobility	Air - little volatile Water - soluble in water, partially evaporate Soil - little probable absorption – Koc = n.d.
Persistence and degradation	Easily biodegradable
Bioaccumulation potential	Not bioaccumulable – low Pow=1

**HYDROGEN PEROXIDE**

Acute toxicity EC10 bacteria ( <i>pseudomonas putida</i> 16h)	11 mg/l
Acute toxicity EC50 crustaceans ( <i>daphnia magna</i> 24h)	7.7 mg/l
Acute toxicity LC50 fish ( <i>pimephales promelas</i> 96h)	16.4 mg/l
Mobility	Air - little volatile Water - soluble in water, unlikely evaporate Soil - not significant absorption – decomposes
Persistence and degradation	Rapidly biodegradable
Bioaccumulation potential	Not bioaccumulable – log Pow= n.d.

**13. DISPOSAL CONSIDERATIONS**

For safety measures about handling of excess and residuals see section 7 and 8.

It is advisable to dispose the product and the packaging in strict observance with the local rules.

Product

It is advisable to dispose of the product by combustion in authorized structure. Before starting the combustion procedure, it is recommended to dilute the peroxide with adequate plasticizers. If the product is correctly ignite, it decomposes itself in carbon dioxide and water.

Contaminated packaging

Before the packaging is disposed of, it must be purified with water and the effluents must be treated as refuse.

#### 14. TRANSPORT INFORMATION

UN NUMBER:

UN 3105 AIR TRANSPORT – I.A.T.A./I.C.A.O.

PACKING GROUP:

II Class 5.2  
Labelling 5.2  
Auxiliary risk ---

LAND TRANSPORT - ADR / RID

SEA TRANSPORT – I.M.D.G. Code

UN 3105, Organic Peroxide type D, liquid

Class 5.2

(ACETYL ACETONE PEROXIDE) 5.2,P.G. II ADR

EmS (packing) F-J, S-R

Class

5.2, II Labelling 5.2

Labelling

5.2 Auxiliary risk ---

TREM-Card

CEFIC TEC(R)- 52GP1-L Marine pollutant no

#### 15. REGULATORY INFORMATION

##### Information on labelling:

Commercial name see section 1  
Responsible for intake on market of the UE see section 1  
Chemical name of the preparation and the contained substances see section 1 e 2

Classification carried out according to the Decree Ministerial 28 February 2006 (29° adaptation of the Directive 67/548/CEE).

Warning symbols: O Oxidizing Xi Irritant

R(isk) phrase(s)

R7: May cause fire. R36/38: Irritating to eyes and skin.

S(safety) phrase(s)

S3/7: Keep container tightly closed in a cool place. S14: Keep away from reducing agents, alkali and compounds with heavy metal bases (e.g. accelerators). S16: Keep away from sources of ignitions. No smoking. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39: Wear suitable protective clothing, gloves and eye/face protection. S45: In case of accident or if you feel unwell, seek medical advice immediately (Show the label where possible). S50: Do not mix with accelerating agents or promoters.

Nominal quantitative of the contents: the product is markets in packing till 25 Kg. capacities.

Disposal national pertinent:

Legislative Decree 334/99

Unless local restriction the product is submitted to the requirements for storage facilities above 50 tons

D.Lg.vo 626/94

Art. 72 decies - Sanitary Controls are obligatory periodically when the risk is not moderated for chemical agents which are dangerous for the health and when they answer to the criteria for the classification like: - toxic, much toxic. - Injurious, - sensibilising, - irritant. The biological monitoring is obligatory when the workers are exposed to agents for which a value for biological limit has been fixed.

**16. OTHER CONSIDERATIONS****ACETYL ACETONE PEROXIDE**

R7	May cause fire
R36	Irritant to eyes

**DIACETONE ALCOHOL**

R36	Irritating to eyes
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**HYDROGEN PEROXIDE**

R5	Heating may cause an explosion
R8	Contact with combustible material may cause fire
R20/22	Harmful if swallowed, in contact with skin and if swallowed
R35	Causes severe burns

This card has been written the 28.04.2006 on the base of how much decided from the D.M.28.01.1992 (Directive the EEC 91/155, modified from Directive the EEC 93/112), D.Lgs n. 52 of the 03.02.1997, D.M.04.04.1997, D.M.28.04.1997, D.M. 07.09.2002, D.Lgs.n.65 of the 14.03.2003. Bibliographical references: Given IUCLID set; NIOSH, The Registry of Toxic Effects

Product inserted near the Archives Prepares for Dangerous product of the Advanced Institute of Health (ISS) with the code: P300

All suggestions included in this safety information card are the summary of the most reliable data available at the moment. It is however impossible to guarantee that these instructions are sufficient and/or valid for any application, some data are still in review. They are informative, they do not represent some guarantee of the characteristics of the product and they do not motivate some contractual legal relationship. The directory of the law witnesses and regulations does not have to be considered like exhausting.

For any further information, users may directly contact the Promox Technical Service.

Bibliographic references: IUCLID Data set; NIOSH, the registry of toxic effects.

**PROMOX SRL**

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