

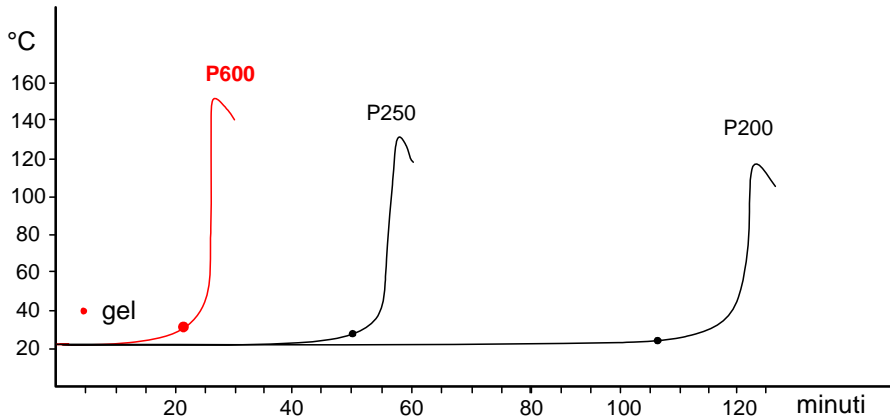
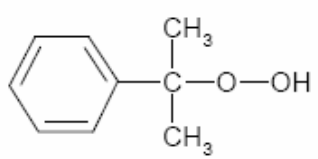
REVISION N° 00	DATED 20.12.2011	PROMOX P601
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PRODUCT AND COMPANY IDENTIFICATION

Commercial name	PROMOX P601		
Chemical name	Cumene Hydroperoxide Solution in Cumene		
Intended use	For Industrial Use – Curing of Unsaturated Polyester Resins – Reaction Initiator		
Manufacturer/supplier	PROMOX S.p.A.	Via A. Diaz, 22/a	21038 Leggiuno (VA)
	tel. +39/0332/648380	fax +39/0332/648105	e-mail info@promox.eu
Emergency telephone	In the case of any accidental contact, call:		
	ANTIPOISONS CENTER – MILAN – ITALY		TEL. +39/02/66101029
	PROMOX S.p.A. – 24h/24h		TEL. +39/0332/649267

PRODUCT PROPERTIES AND RANGE OF APPLICATION

Description for the Products	<p>The PROMOX P601 is a solution Cumene Hydroperoxide (CAS n. 80-15-9) in Cumene. It may be used for the curing of unsaturated polyester resins in the presence of various accelerating systems. Excellent performances may be obtained with vinyl esters resins together with Cobalt Salts.</p> <p>The PROMOX P601 is used in most production cycles at temperature ranging from 15 to 80 degrees centigrade. The concentration of use generally ranges from 1 to 2 part /100 parts of resin.</p>
Accelerators and Promoters	Generally cobalt salts (octoate, naphtenate) are used but seldom vanadium o manganese salts. The accelerator performances can be improved by adding promoters which exalt their action. Pay attention, some promoters may give out of the ordinary behaviours.
Application Sectors	<p>The PROMOX P601 may replace other products of the Promox range when the formation of foams, during the mixing phase with pre accelerated resins, must be avoided or when an extremely fast polymerizations of composites and laminated (thicknesses > 6/8 mm) must be performed.</p> <p>Cross-Linking Agent recommended for particular Uses. PROMOX P601 assures a high reactivity but a Low exothermic temperature. Application sectors: Vinylesters resins. At ambient temperature: Vacuum Bag & Infusion. At high temperature: Not recommended.</p>
Uses and Contraindications	The PROMOX P601 is specifically suitable for a fast polymerization of vinyl esters resins. With orthofallic resins we obtain long gel times.
Packaging	Promox Peroxides are normally packaged in 25 kg polyethylene drums. Smaller packaging is available as requested. Drums are palletised from 600 to 900 Kg weight net.
Stability	The product is stable under normal storage conditions for at least six months from the date of production. 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. When the product is stored under recommended storage conditions, it keeps the original properties for a period of at least six months after delivery. Recommended storage Temperature: < 30°C.
Curing Diagrams	The following diagram helps the users to choose the most suitable Promox product. For this kind of test a vinyl ester pre accelerated and thermostated (25°C) resin has been used. The curves were obtained by adding 2 parts of peroxide /100 parts of resin at 25° C.



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PHYSICAL AND CHEMICAL PROPERTIES

General information			
	Characteristic	Characteristic	Characteristic
Appearance	-	-	Liquid, clear
Colour	-	-	Colourless, slight yellow
Odour	-	-	Characteristic
Active Oxygen content	%	8.4	
Peroxides content	%	> 45	
Flegmatizer – Phthalates Free Content	%	> 55	

Other information			
	Characteristic	Characteristic	Characteristic
Boiling point/ interval	°C	100°C	decomposes
Flash point (closed cup) - EN ISO 3680	°C	60°C	
SADT (Self Accelerated Decomposition Temperature)	°C	60°C	
Relative density UNI EN ISO 12185-00	d 20/20	1.020	(SPC 2010)
Viscosity at 20 °C ISO UNI EN 3104	mPa.s	04 - 06	(SPC 2010)

PRINCIPAL RISK

Principal risk	May cause fire. Harmful in contact with skin and if swallowed. Toxic by inhalation. Causes burns. Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Health effects – Eye	Contact with eyes causes injury to the cornea and eyelids.
Health effects – Skin	Contact with skin causes burns. Harmful in contact with skin.
Health effects – Ingestion	Swallowing causes corrosion to oral cavity, pharynx and to alimentary canal. Harmful if swallowed.
Health effects – Inhalation	Toxic by inhalation.

STABILITY AND REACTIVITY

Storage Stability	The product is stable under the recommended conditions of Storage and Manipulation. Under the recommended conditions of maintenance the product maintains unchanged his own characteristics for a long period of storage, more than 6 months. Store in fresh place, well aired, in the closed original containers, away from every sources of heat, from inflammable/incompatible substances.
Reactivity	It can rapidly decompose if heated or mixed with other incompatible chemical compounds. 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 acids and alkalis, especially if in a concentrated form; any oxidizers, any peroxides and all organic and flammable compounds. Store in a well ventilated place away from sources of heat and direct sunlight.
Decomposition products	The main products of the decomposition/combustion process are: hydrocarbons, oxygen, Carbon dioxide and carbon monoxide, water. The product is stable under normal storage conditions. No hazardous decomposition products if used and stored according to specifications. Do not inhale explosion gases or combustion gases.

TOXICOLOGICAL INFORMATION

CUMENE HYDROPEROXIDE - CUMIL HYDROPEROXIDE		
Acute toxicity - Oral	LD50 oral - (lethal dose rat)	382 mg/Kg
Acute toxicity - Inhalation	LC50 (lethal concentration rat)	220 ppm/4h
Eye irritation	(rabbit)	Severely Irritating
Skin irritation	(rabbit)	Severely Irritating
Genotoxicity "in vitro" (Ames test)		Not Mutagenic
Skin sensitization		Not sensitizing

ECOLOGICAL INFORMATION

CUMENE HYDROPEROXIDE - CUMIL HYDROPEROXIDE		
Acute toxicity EC3 bacteria	n.d.	
Acute toxicity EC50 crustaceans (daphnia magna 24h)	7 mg/l	
Acute toxicity LC50 fish	n.d.	
Mobility	Air	Little volatile
	Water	Not Soluble
	Soil	Possible strong absorption – Koc = 59,16
Persistence and degradation	n.d.	
Bioaccumulation potential	Not bioaccumulable	

HANDLING AND FIRST MEASURES

Personal precautions	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. Wear suitable protective gloves of neoprene or synthetic rubber. Wear eye/face protection during pouring.
Handling	Apply the legislation regarding the Industrial Hygiene/Safety job. 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. Avoid loss and/or disperses. Keep container tightly sealed. Keep away from dirt, rust, chemicals in particular concentrated acids, alkalis and accelerators (e.g. heavy metal compounds and amines) those can cause the decomposition of the product. See Section 10. The containers used to collect and pour out the product are to be kept scrupulously clean. Avoid peroxide refilling into its original container.
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.
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 - 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 - Ingestion	Do not induce vomiting. Rinse mouth with water and immediately take him to the nearest first-aid post.
Extinguishing media	Suitable Extinguishing Media: Water Spray, alcohol resistant foam, powder, CO₂. Fight larger fires with Water Spray or alcohol resistant foam. Unsuitable Extinguishing Media: Halones, Water with full jet. 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, cool down with water.
Methods for cleaning up	Do not allow to enter drains or water courses. Cover the remainder with inert absorbent (e.g. vermiculite) or hearth for disposal. 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. Large quantities should be diluted with suitable desensitisation agent to a concentration below 10 % before disposal. After the pick up of the product neutralize with soda or lime and dilute with water avoiding excessive liquid waste dispersion. In case of large spillage the environmental authority should be informed.

For any further information, refer to the safety data sheet of the product, according to Directive 1907/2006.

REGULATORY INFORMATION

Warning Symbols:


O - Oxidizing



T - Toxic



N - Dangerous to the Environment

Risk phrases

R7: May cause fire. **R21/22:** Harmful in contact with skin and if swallowed. **R23:** Toxic by inhalation. **R34:** Causes burns. **R48/20/22:** Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. **R51/53:** Toxic to aquatic organism, may cause long-term adverse effects in the aquatic environmental.

Safety phrases

S37: 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, promoters or reducing agents.

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 any guarantee of the characteristics of the product and they do not motivate any contractual legal relationship. The directory of the law witnesses and regulations does is not to be considered like exhausting. For any further information, users may directly contact the Promox Technical Service.

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info@promox.eu