

PROMOX P650TX – METHYLISOBUTYLKETONE PEROXIDE

TECHNICAL DATA SHEET – REV. 02 - 2012

PRODUCT AND COMPANY IDENTIFICATION

Commercial name	PROMOX P650TX – Methyl Isobutyl Ketone Peroxide Solution, Phthalate Free Flegmatizer		
Chemical name	Methyl Isobutyl Ketone Peroxide Solution, Phthalate Free Flegmatizer		
Intended use	For Industrial/Professional Use - Curing of Unsaturated Polyester Resins - Reaction Initiator		
Manufacturer/supplier	PROMOX S.P.A. Via A. Diaz, 22/a 21038 Leggiano (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 of the Products	PROMOX P650TX is a Methyl Isobutyl Ketone Peroxide Solution in Phthalate Free Flegmatizer. This kind of new flegmatizer, employed for this type of formulation, prevent the complications connected to the manipulation, to the use and to the disposal of the formulations which enclose other dangerous or classified flegmatizers. PROMOX P650TX is formulated with 2,2,4-trimethyl-1,3-pentenediol Diisobutyrate, colourless liquid and low vapour pressure liquid and so it hardly evaporates during the standards conditions of employment. The low viscosity ratio, comparing to the phthalates, may make easy Manipulation and Dosage. PROMOX P650TX (MIBKP) may be used for the curing of unsaturated polyester resins as such or in the presence of a cobalt accelerator in the temperature range of 60°C-150°C. The concentration of use generally ranges from 1 to 2 part /100 parts of resin.
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. PROMOX P650TX is employed in application cycles, with or without the addition of cobalt salts, for those applications where a long gel time or production time is required at ambient temperature. At the same time P650TX may be used in order to obtain a fast cure at higher temperatures (60 - 100°C). The addition of an accelerator reduces the time of polymerization.
Uses and Contraindications	PROMOX P650TX shows also, without the addition of a cobalt accelerator, a high reactivity at elevated temperatures. This characteristic demonstrates the low activation temperature of this kind of resins/peroxide system. This kind of peroxide is successfully used in a temperature range of approximately 80°C -150°C. PROMOX P650TX is successfully used for the production of flat and corrugated sheets where a discoloration by the cobalt accelerator is not acceptable. Cross-Linking Agent for particular and special uses at Medium-High reactivity. Application Area: Polyester Resins & Vinylester Resins. At Elevated Temperature: Continuous Lamination, Filament Winding. At high Temperature: Pultrusion.
Packaging	PROMOX P650TX shows also, without the addition of a cobalt accelerator, a high reactivity at elevated temperatures. This characteristic demonstrates the low activation temperature of this kind of resins/peroxide system. This kind of peroxide is successfully used in a temperature range of approximately 80°C -150°C. PROMOX P650TX is successfully used for the production of flat and corrugated sheets where a discoloration by the cobalt accelerator is not acceptable.
Shelf Life	The PROMOX P650TX is opportunely stabilized in order to guarantee a safety Manipulation and Storage at ambient temperature. Recommended storage Temperature: < 30°C. The product is stable under recommended handling and storage conditions for at least six months from the date of production. For further information to make reference to the MSDS.
Stability	The product is stable under recommended handling and storage conditions for at least six months from the date of production. In order to keep the product characteristics unaltered for a long time, store in a cool, well-ventilated position. Avoid open flames, sparks, direct sunlight and other sources of ignition. 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.
Material 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, all organic and flammable compounds. Store in a well ventilated place away from sources of heat and direct sunlight.
Major decomposition products	The main products of the decomposition process are: Cobalt Oxides, Carbon dioxide and carbon monoxide, water. No hazardous decomposition products if used and stored according to specifications. Emergency procedures will vary depending on conditions. The customer should have an emergency response plane in place. Exposure to products of combustion or decomposition can cause adverse health effects.
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 and incompatibles materials; - Store away from Promoters and Accelerators - Store away from foodstuffs, drinks and feeding stuffs.

PROMOX P650TX – METHYLISOBUTYLKETONE PEROXIDE

TECHNICAL DATA SHEET – REV. 02 - 2012

CLASSIFICATION AND LABELLING

Classification Dir. 1999/457CE

Phrase(s) R:

R7, R10, R20/22, R36/38, R43.

Phrase(s) S: S3/7, S14, S17, S26, S28,

S35, S36/37/39, S45, S61



O - Oxidizing



Xn - Harmful

PRINCIPAL RISK

Principal risk	It may cause fire. Flammable. Harmful by inhalation and if swallowed. Irritating to eyes and skin. May cause sensitization by skin contact.
Health effects – Eye	Contact with eyes causes injury to the cornea and eyelids. Irritating to eyes.
Health effects – Skin	Contact with skin causes burns. Irritating to skin.
Health effects – Ingestion	Swallowing causes corrosion to oral cavity, pharynx and to alimentary canal. Harmful if swallowed.
Health effects – Inhalation	Harmful by inhalation.
Health effects – Environment	N.d.

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/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.

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.
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). In case of unconsciousness place patient stably in side position for transportation. 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 water keeping the eyelid always far from the eye. Immediately take the injured person to an oculist. Hold the eyelids apart during the flushing to ensure rinsing the entire surface of the eye and lids with water. Do not treat injured eyes with any oils.
First aid - Ingestion	Do not induce vomiting. Get medical attention immediately by calling a physician or a poison control centre. Rinse mouth with water and immediately take him to the nearest first-aid post. Never give anything by mouth to an unconscious or convulsing person. If vomiting occurs, the patient should lie on their left side while vomiting to reduce the risk of aspiration.
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	Spilled material should be swept up with an inert, moist diluent such as perlite, vermiculite, or sand, and placed in a clean polyethylene drum or a polyethylene pail. Wet drum or pail with water prior to sealing containers. Never try to recover the discharged product, or reintroduce it into its original containers.

PROMOX P650TX – METHYLISOBUTYLKETONE PEROXIDE

TECHNICAL DATA SHEET – REV. 02 - 2012





STABILITY AND REACTIVITY

Materials to avoid

Decomposition products

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. The main products of the decomposition process are: Oxygen, Hydrocarbons, carbon dioxide and carbon monoxide, water. No hazardous decomposition products if used and stored according to specifications. Emergency procedures will vary depending on conditions. The customer should have an emergency response plane in place.

TRANSPORT INFORMATION

	ADR/RID	ADN/ADNR	IMDG	IATA
UN Number	UN 3105	UN 3105	UN 3105	UN 3105
UN proper Shipping Name	UN 3105, Organic Peroxide Type D, Liquid, Methyl Isobutyl Ketone Peroxide(s), 5,2, P.G. II, (D)			
Transport Hazard Class(es)	5.2	5.2	5.2	5.2
				
Packing Group	II	II	II	II
Environmental Hazards	No	No	No	No
Special precautions for user	Not Available	Not Available	Organic Peroxides	----
Tunnel code	Tunnel Code: D	----	----	----
Additional Information	----	----	EmS: F-J, S-R	Organic Peroxides

PHYSICAL AND CHEMICAL PROPERTIES

Characteristic	Unit of measure	Declared value
Appearance	-	Liquid, clear
Colour	-	Colourless
Odour	-	Distinctive
Active oxygen content	%	8,9
Peroxide content	%	< 40
Solvents content	%	> 60
Water content	%	< 2,5%
Characteristic	Unit of measure	Declared value
pH (in aqueous solution)	-	Acido
Boiling point/ interval	°C	100°C decompose !
Flash point (closed cup – Seta Flash)	°C	50°C
Flammability ASTM D-4206-96(2001)	°C	Flammable
Vapor pressure	hPa	0,150
Relative density UNI EN ISO 12185-00	d 20/20	1,9858 – 0,9900
Solubility in water	-	Partly soluble
Liposolubility	-	Soluble in polar solvents
Viscosity at 20 °C UNI EN ISO 3104:2000	mm ² /s	12 - 14
Vapor Density	aria=1	>1

Results of PBT and vPvB assessment: Negative. Component included in the present mixture and listed in SVHC: **No One. Other adverse effects:** Not any. **Additional ecological information: Water hazard class 1** (German Regulation (VwVwS) of 17 May 1999 and amendments). **Self-assessment:** slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach sewage water or drainage conduit undiluted or un neutralized.

REGULATORY INFORMATION

REACH is a new European Community Regulation on chemicals and their safety (EC 1907/2006). The aim of REACH is to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances. Promox has activated the PRE REGISTRATION procedures, as requested by this regulations, for all the products of their own interest (Pre Registration Number MIBKP 2115513326-55-0000). At the same time Promox has verified that all the suppliers of raw materials, which are involved into their own productive cycles, have carried out same pre registration iter.

Bibliographical references: IUCLID Data set; NIOSH, The Registry of Toxic Effects.

This product is registered in the Prepared Archives for Dangerous product of the Advanced Institute of Health (ISS) coded: P650TX.

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.