



# Safety Data Sheet

Infosafe No™ IMCNP	Issue Date : June 2014	ISSUED by IMCDAST
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Product Name : **TRIGONOX K-90**

Classified as hazardous

## 1. Identification

<b>GHS Product Identifier</b>	TRIGONOX K-90
<b>Product Code</b>	4912056
<b>Company Name</b>	IMCD Australia Limited (ABN 44 000 005 578)
<b>Address</b>	1st Floor, 372 Wellington Road Mulgrave Victoria 3170 Australia
<b>Telephone/Fax Number</b>	Tel: (03)8544 3100 (Business hours) Fax: (03)8544 3299
<b>Emergency phone number</b>	1800 625 526
<b>Emergency Contact Address</b>	NEW ZEALAND Emergency Response: 0800 500 288 IMCD New Zealand Limited 459 Great South Road Penrose, Auckland Ph: (09) 582 0250 Fax (09) 525 0030
<b>E-mail Address</b>	reg@imcd.com.au
<b>Recommended use of the chemical and restrictions on use</b>	Polymerisation initiator.
<b>Additional Information</b>	It is the user's responsibility to determine the suitability of this product for their applications and their methods of use.
<b>Other Information</b>	THIS SDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE. IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

## 2. Hazard Identification

<b>GHS classification of the substance/mixture</b>	Classified as Hazardous according to the criteria of the New Zealand HSNO Act. Hazardous to the Aquatic Environment - Long-Term Hazard: Category 2 Acute Toxicity - Dermal: Category 4 Acute Toxicity - Inhalation: Category 3 Organic Peroxides: Type F Acute Toxicity - Oral: Category 4 STOT Repeated Exposure Category 2 Skin Corrosion/Irritation: Category 1B ERMA Number: HSR100055 Haz Classes: 5.2F, 6.1C(inhalation), 6.1D(ingestion, contact), 6.9A(inhalation, ingestion), 8.2B, 8.3A, 9.1B Group Standard: ORGANIC PEROXIDES, TOXIC [6.1], CORROSIVE
<b>Signal Word (s)</b>	DANGER
<b>Hazard Statement (s)</b>	H242 Heating may cause a fire. H302 Harmful if swallowed. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H331 Toxic if inhaled. H373 May cause damage to organs through prolonged or repeated exposure. H411 Toxic to aquatic life with long lasting effects.

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**Pictogram (s)**

Corrosion, Environment, Flame, Health hazard, Skull and crossbones

**Precautionary statement – Prevention**

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
 P222 Do not allow contact with air.  
 P234 Keep only in original container.  
 P260 Do not breathe mist/vapours/spray.  
 P264 Wash thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P271 Use only outdoors or in a well-ventilated area.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statement – Response**

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a POISON CENTER or doctor/physician.  
 P330 Rinse mouth.

**Precautionary statement – Storage**

P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 Store locked up.  
 P410 Protect from sunlight.

**Precautionary statement – Disposal**

P501 Dispose of contents/container according to local regulations.

**3. Composition/information on ingredients**

**Composition, information on ingredients** Cumyl hydroperoxide, 90% solution in aromatic solvent mixture.

Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	CUMENE HYDROPEROXIDE	80-15-9	87-90 %
	Benzenemethanol, alpha, alpha.-dimethyl-	617-94-7	5-10 %
	Cumene	98-82-8	1-5 %
	Acetophenone	98-86-2	1-2 %

**4. First-aid measures**

**First Aid Measures** Call a physician immediately.

**Inhalation** Get medical attention immediately by calling a physician or a poison control centre. Remove to fresh air. If not breathing, give artificial respiration. Oxygen may additionally be given, by trained personnel, if it is available.

**Ingestion** Do not induce vomiting. Get medical attention immediately by calling a physician or a poison control centre. If victim is conscious and alert, give a cupful of water. 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.

**Skin** Immediately flush skin with plenty of water while removing contaminated clothing. Get medical attention if symptoms occur. Wash clothing before



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<b>Eye contact</b>	reuse. Thoroughly clean or destroy contaminated shoes. Immediately start continuous flushing of eyes with water for at least 15 minutes. If easy to do, contact lenses should be removed during the flushing by trained personnel. Hold the eyelids apart during the flushing to ensure rinsing the entire surface of the eye and lids with water. Get medical attention immediately.
<b>Advice to Doctor</b>	Persons with pre-existing skin, respiratory and/or central nervous system disease may be at increased risk if exposed to this material. This material is severely corrosive to the eyes and may cause delayed keratitis. The normally prescribed 15 minute eye irrigation after exposure may be difficult because of the severe pain. The prior installation of a topical ocular anesthetic is essential to facilitate a comprehensive ocular lavage. If swallowed, do not induce vomiting. Give patient plenty of water to drink. Ingestion of this corrosive material may result in severe ulceration, inflammation and possible perforation of the upper alimentary tract, with hemorrhage and fluid loss. Aspiration of this material during induced emesis can result in severe lung injury. Contact a poison control centre for additional treatment information. Treat any additional effects symptomatically.
<b>Most important symptoms/effects, acute and delayed</b>	Harmful in contact with skin and if swallowed. Toxic by inhalation. causes burns. Risk of serious damage to eyes. Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. Causes injury to the cornea and eyelids. Risk of serious damage to eyes.

## 5. Fire-fighting measures

<b>Fire Fighting Measures</b>	Evacuate all non-essential personnel. Extinguish a small fire with powder or carbon dioxide then apply water to prevent re-ignition. Cool closed containers with water. Water used to extinguish a fire should not be allowed to enter the drainage system or water courses. After a fire, ventilate thoroughly the area and soak with water, clean the wall and metallic surfaces. Waterspray, alcohol resistant foam, sand, dry chemical powder, CO2.
<b>Suitable extinguishing media</b>	
<b>Unsuitable Extinguishing Media</b>	Halons.
<b>Hazards from Combustion Products</b>	Hazardous decomposition/combustion products: CO2, carbon monoxide, acetophenone, 2-phenylisopropanol, methane.
<b>Specific hazards arising from the chemical</b>	CAUTION: reignition may occur. Decomposition under effect of heating. If involved in a fire, it will support combustion. In case of fire and/or explosion do not breathe fumes.

## 6. Accidental release measures

<b>Spills &amp; Disposal</b>	Stop leakage if possible. Eliminate all sources of ignition and do not generate flames or sparks. Transfer remaining product from leaking containers to a clean and suitable container. Cover the remainder with inert absorbent (e.g. vermiculite) for disposal. Keep contents moist. The waste should NOT be confined. Flush surroundings with large amounts of water.
<b>Personal Precautions</b>	Use self-contained breathing apparatus. Avoid contact with skin and eyes. For personal protection, see section 8.
<b>Environmental Precautions</b>	Do not allow to enter drains or water courses.
<b>Other Information</b>	CAUTION: reignition may occur. Vapours are heavier than air and may spread along floors. Vapours may travel to a source of ignition and flash back. Evacuate personnel to safe area.

## 7. Handling and storage

<b>Precautions for Safe Handling</b>	Never weigh out in the storage room. When using, do not eat, drink or smoke. Do not pipette by mouth. Do not breathe fumes/vapour. Handle in well ventilated areas. Apply effective local ventilation. Eliminate all sources of ignition and do not generate flames or sparks. Keep away from reducing
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<b>Conditions for safe storage, including any incompatibilities</b>	agents (e.g amines), acids, alkalies and heavy metal compounds (e.g. accelerators, driers, metal soaps). Keep product and emptied containers away from heat and sources of ignition. Confinement must be avoided. Avoid contact with skin and eyes. Avoid incompatible materials (See Section 10). Store in accordance with local/national regulations. Keep away from food, drink and animal feed. Store in a dry well ventilated place away from sources of heat and direct sunlight. Store separately from other chemicals. Keep only in the original container. Keep container upright to prevent leakage.
<b>Storage Temperatures</b>	Avoid temperatures below -30°C. If product freezes or separates, contact supplier. For maximum quality, store below: 40°C
<b>Additional information on precautions for use</b>	Fire and explosion prevention: Use explosion protected equipment. Keep away from sources of ignition - No smoking. Vapours are heavier than air and may spread along floors. Use non-sparking tools in areas where explosive vapour/air mixtures may occur. Do not cut or weld on or near this container when empty.
<b>Other Information</b>	It is recommended to use electrical equipment of temperature group T3. However, autoignition can never be excluded. Wash hands thoroughly after handling or contact. Keep working clothing separately and do not take them home.

## 8. Exposure controls/personal protection

**Exposure Controls, Personal Protection** The following Australian and New Zealand Standards will provide general advice regarding safety clothing and equipment:  
 Respiratory equipment: AS/NZS 1715, Protective Gloves: AS 2161, Industrial Clothing: AS2919, Industrial Eye Protection: AS1336 and AS/NZS 1337, Occupational Protective Footwear: AS/NZS2210.

Occupational exposure limit values	<u>Name</u>	<u>STEL</u>		<u>TWA</u>		<u>Footnote</u>
		<u>mg/m3</u>	<u>ppm</u>	<u>mg/m3</u>	<u>ppm</u>	
	Cumene	375	75	125	25	

**Appropriate engineering controls** Ensure good ventilation and local exhaustion of the working area. Explosion proof ventilation recommended.

**Respiratory Protection** Do not breathe vapour. In case of insufficient ventilation, wear suitable respiratory equipment.

**Eye Protection** Wear eye/face protection.

**Hand Protection** Wear suitable protective gloves of neoprene or synthetic rubber.

**Body Protection** Wear suitable protective clothing.

**Other Information** Emergency shower and facilities for rinsing eyes must be accessible. Launder clothes before reuse.

## 9. Physical and chemical properties

<b>Form</b>	Liquid
<b>Appearance</b>	Clear, colourless.
<b>Odour</b>	Pungent.
<b>Freezing Point</b>	-30°C
<b>Boiling Point</b>	Decomposes before boiling.
<b>Solubility in Water</b>	Miscible at 20°C
<b>Specific Gravity</b>	1.03-1.07 at 20°C
<b>pH</b>	Slightly acidic.
<b>Vapour Pressure</b>	0.4 kPa at 20°C



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<b>Coefficient</b>	No data.
<b>Water/Oil Distr.</b>	
<b>Viscosity</b>	10.9 mPa.s at 20°C
<b>Volatile Component</b>	Not determined.
<b>Flash Point</b>	Above the SADT value. The SADT is 70°C
<b>Auto-Ignition</b>	No data.
<b>Temperature</b>	
<b>Flammable Limits - Lower</b>	No data.
<b>Flammable Limits - Upper</b>	No data.
<b>Other Information</b>	Peroxide content: 86 - 90% Active oxygen content: 9.1 - 9.5%

## 10. Stability and reactivity

<b>Reactivity</b>	SADT - (Self accelerating decomposition temperature) is the lowest temperature at which self accelerating decomposition may occur with a substance in the packaging as used in transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and above the following temperature: 70°C. Contact with incompatible substances can cause decomposition at or below the SADT.
<b>Conditions to Avoid</b>	Avoid temperatures below -30°C. To maintain quality store in original closed container below 40°C. A high degree of confinement must be avoided.
<b>Incompatible Materials</b>	Avoid contact with rust, iron and copper. Contact with incompatible materials such as acids, alkalies, heavy metals and reducing agents will result in hazardous decomposition. Do not mix with peroxide accelerators. Use only stainless steel 316, PP, polyethylene or glass-lined equipment.
<b>Hazardous Decomposition Products</b>	
<b>Hazardous Polymerization</b>	Polymerisation does not occur.
<b>Other Information</b>	Emergency procedures will vary depending on conditions. The customer must have an emergency response plan in place.

## 11. Toxicological Information

<b>Toxicology Information</b>	No experimental toxicological data of the product as such available. The following data are applicable to the ingredient(s) listed below:
<b>Acute Toxicity - Oral</b>	Cumyl hydroperoxide: LD50, rat: 382mg/kg 2-phenylisopropanol: LD50, rat: 1300 mg/kg Cumene: LD50, rat: 2910 mg/kg Cumene: LD50, rabbit: 12300 mg/kg
<b>Acute Toxicity - Dermal</b>	
<b>Acute Toxicity - Inhalation</b>	Cumyl hydroperoxide: LC50, rat, 4h: 220 ppm Cumene: LC50, mouse: 2000 ppm
<b>Skin Sensitisation</b>	Cumyl hydroperoxide: Not sensitising.
<b>Serious eye damage/irritation</b>	Cumyl hydroperoxide: Severely irritating. 2-phenylisopropanol: Irritating to eyes. Cumene: LD50, rat: Mildly irritating.
<b>Mutagenicity</b>	Cumyl hydroperoxide: Ames Test - not mutagenic.
<b>Skin corrosion/irritation</b>	Cumyl hydroperoxide: Severely irritating. 2-phenylisopropanol: Irritating to skin. Cumene: LD50, rat: Mildly irritating.

## 12. Ecological information



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<b>Ecological Information</b>	No experimental ecological data are available on the preparation as such. The following data are applicable to the ingredient(s) listed below:
<b>Environmental Fate</b>	Cumyl hydroperoxide: Degradation Biotic - Not readily biodegradable (closed bottle test). Cumene: Degradation Biotic - Readily biodegradable.
<b>Bioaccumulative Potential</b>	Cumene: Bioconcentration Factor (BCF) = 35.5
<b>Acute Toxicity - Fish</b>	Cumyl hydroperoxide: LC50, Onchorhynchus mykiss, 96h: 3.9mg/l Cumene: LC50, Pimephales promelas, 96h: 6.32 mg/l
<b>Acute Toxicity - Bacteria</b>	Cumene: Activated sludge respiration inhibition test EC50 = 17 mg/l

### 13. Disposal considerations

<b>Disposal Considerations</b>	Dispose of waste according to applicable local, state and federal regulations.
<b>Product Disposal</b>	Due to the high risk of contamination recycling/recovery is not recommended. Waste disposal in accordance with regulations (most probably controlled incineration).
<b>Container Disposal</b>	According to local regulations. Emptied container might retain product residues. Follow all warnings even after the container is emptied. Do not wash residues into drains or other waterways.

### 14. Transport information

<b>Transport Information</b>	NZS 5433:2007 Transport of Dangerous Goods on Land & Dangerous Goods Rule 2005.
<b>U.N. Number</b>	3109
<b>UN proper shipping name</b>	ORGANIC PEROXIDE TYPE F, LIQUID - Cumyl hydroperoxide
<b>Transport hazard class(es)</b>	5.2
<b>Sub.Risk</b>	8
<b>Packing Group</b>	II
<b>IERG Number</b>	32
<b>Other Information</b>	Dangerous Goods of Class 5.2 Organic Peroxides are incompatible in a placard load with any of the following: - Class 1, Class 2, Class 3, Class 4, Class 5.1, Class 7, Class 8, Fire risk substances and combustible liquids. Dangerous Goods of Class 8 Corrosives are incompatible in a placard load with any of the following: - Class 1, Class 4.3, Class 5, Class 6, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids and Class 7.

### 15. Regulatory information

<b>Regulatory Information</b>	All components of this material are listed on or exempt from the New Zealand Inventory of Chemicals (NZIoC).
<b>Poisons Schedule</b>	Not Scheduled
<b>HSNO Approval Number</b>	HSR100055
<b>Hazard Category</b>	Toxic, Corrosive, Oxidising, Dangerous for the environment
<b>AICS (Australia)</b>	All components of this material are listed on or exempt from the Australian Inventory of Chemical Substances (AICS).

### 16. Other Information

<b>Contact</b>	An electronic version of this SDS is available at <a href="http://www.imcdgroup.com">www.imcdgroup.com</a>
<b>Person/Point Other Information</b>	ADG Code: Australian Code for the Transport of Dangerous Goods by Road and



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Rail, 7th Edition  
 AICS: Australian Inventory of Chemical Substances  
 ASCC: Office of the Australian Safety and Compensation Council  
 BCF: Bioconcentration Factor  
 CAS number: Chemical Abstracts Service Registry Number  
 CMR: Carcinogenic, Mutagenic or toxic to Reproduction  
 DMEL: Derived Minimum Effect Level  
 DNEL: Desired NO Effect Level  
 EPA: Environmental Protection Agency  
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
 Hazchem Code: Emergency action code of numbers and letters that provide information to emergency services especially fire fighters  
 IARC: International Agency for Research on Cancer  
 IOELV: Indicative Occupational Exposure Limit Value  
 LC50: Lethal Concentration, 50 percent  
 LD50: Lethal Dose, 50 percent  
 NICNAS: National Industrial Notification & Assessment Scheme  
 NIOSH: National Institute for Occupational Safety & Health  
 NOAEL: No Observed Adverse Effect Level  
 NOEC: No Observed Effect Concentration  
 NOS: Not otherwise specified  
 NTP: National Toxicology Program (USA)  
 OEL: Occupational Exposure Limit  
 OSHA: Occupational Safety & Health Administration  
 PBT: Persistent Bioaccumulative Toxic chemical  
 PMCC: Pensky Martens Closed Cup  
 PNEC: Predicted No Effect Concentration  
 R-Phrase: Risk Phrase  
 STEL: Short Term Exposure Limit  
 STOT-SE: Specific Target Organ Toxicity (Single Exposure)  
 STOT-RE: Specific Target Organ Toxicity (Repeated Exposure)  
 SUSMP: Standard for the Uniform Scheduling of Medicines & Poisons  
 TWA: Time Weighted Average  
 UN Number: United Nations Number  
 vPvB: Very Persistent and Very Bioaccumulative  
 WEEL: Workplace Environmental Exposure Level  
 WEL-TWA: Workplace Exposure Limit, Time Weighted Average  
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