



Safety Data Sheet

Infosafe No™ IMCNP	Issue Date : May 2018	ISSUED by IMCDAST
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Product Name : **TRIGONOX K-90**

Classified as hazardous

1. Identification

GHS Product Identifier TRIGONOX K-90

Product Code 4912056

Company Name IMCD Australia Limited (ABN 44 000 005 578)

Address 1st Floor, 372 Wellington Road Mulgrave
Victoria 3170 Australia

Telephone/Fax Number Tel: (03)8544 3100 (Business hours)
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Emergency phone number 1800 625 526

Emergency Contact Address NEW ZEALAND
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459 Great South Road
Penrose, Auckland
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Fax (09) 525 0030

E-mail Address reg@imcd.com.au

Recommended use of the chemical and restrictions on use Polymerisation initiator.

Other Names

<u>Name</u>	<u>Product Code</u>
TRIGONOX K-90	4917319
TRIGONOX K-90	5404236
TRIGONOX K-90	4912463
TRIGONOX K-90	5404743
TRIGONOX K-90	5404772

Additional Information It is the user's responsibility to determine the suitability of this product for their applications and their methods of use.

Other Information 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

GHS classification of the substance/mixture Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety Regulations, Australia.

Classified as Hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand.

Acute Toxicity - Dermal: Category 4
Acute Toxicity - Inhalation: Category 3
Acute Toxicity - Oral: Category 4
Carcinogenicity category 1B
Germ Cell Mutagenicity: Category 2
Hazardous to the Aquatic Environment - Acute Hazard: Category 2
Hazardous to the Aquatic Environment - Long-Term Hazard: Category 2
Organic Peroxides: Type F

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Signal Word (s) Skin Corrosion/Irritation: Category 1B
 STOT Repeated Exposure: Category 1
 STOT Single Exposure: Category 3 (respiratory tract irritation)
 DANGER

Hazard Statement (s) 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.
 H335 May cause respiratory irritation.
 H341 Suspected of causing genetic defects .
 H350 May cause cancer by inhalation .
 H372 Causes damage to organs through prolonged or repeated exposure .
 H401 Toxic to aquatic life.
 H411 Toxic to aquatic life with long lasting effects.

Pictogram (s) Skull and crossbones, Health hazard, Environment, Flame, Corrosion



Precautionary statement – Prevention P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P220 Keep/Store away from clothing//combustible materials.
 P234 Keep only in original container.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264 Wash contaminated skin 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.
 P281 Use personal protective equipment as required.

Precautionary statement – Response P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
 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.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P310 Immediately call a POISON CENTER or doctor/physician.
 P311 Call a POISON CENTER or doctor/physician.
 P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 P314 Get medical advice/attention if you feel unwell.
 P330 Rinse mouth.
 P363 Wash contaminated clothing before reuse.
 P391 Collect spillage.

Precautionary statement – Storage P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
 P410 Protect from sunlight.
 P411+P235 Store at temperatures not exceeding 40 °C
 Keep cool.
 P420 Store away from other materials.

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Precautionary statement – Disposal P501 Dispose of contents/container according to local/national regulations.

Other Information HSNO Approval Number: HSR100055
 Haz Classes: 5.2F, 6.1C(inhalation), 6.1D(ingestion, contact), 6.6B, 6.9A(inhalation), 8.2B, 8.3A, 9.1B
 Group Standard: ORGANIC PEROXIDES, TOXIC [6.1], CORROSIVE

3. Composition/information on ingredients

Ingredients	Name	CAS	Proportion
	Cumyl 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 %
Preparation Description	Organic peroxide		

4. First-aid measures

First Aid Measures Immediate medical attention is required.
 Move out of dangerous area.
 Show this safety data sheet to the doctor in attendance.
 Symptoms of poisoning may appear several hours later.

Inhalation If breathed in, move person into fresh air.
 Call a physician or poison control centre immediately.
 Remove to fresh air.
 Keep patient warm and at rest.
 If unconscious, place in recovery position and seek medical advice.
 Keep respiratory tract clear.

Ingestion Clean mouth with water and drink afterwards plenty of water.
 Never give anything by mouth to an unconscious person.
 Take victim immediately to hospital.
 Do not induce vomiting! May cause chemical burns in mouth and throat.

Skin Take off contaminated clothing and shoes immediately.
 Rinse immediately with plenty of water.
 Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
 If skin irritation persists, call a physician.

Eye contact Rinse with plenty of water.
 Get medical attention immediately. Continue to rinse during transport.
 Remove contact lenses.
 Protect unharmed eye.
 Keep eye wide open while rinsing.
 Small amounts splashed into eyes can cause irreversible tissue damage and blindness.

Advice to Doctor Treat symptomatically.
 Corrosive effects

Most important symptoms/effects, acute and delayed Harmful if swallowed or in contact with skin.
 Causes serious eye damage.
 Toxic if inhaled.
 May cause damage to organs through prolonged or repeated exposure if inhaled.
 Causes severe burns.

5. Fire-fighting measures

Fire Fighting Measures Use water spray to cool unopened containers.
 Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
 Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Hazards from Combustion Products	Carbon oxides
Special Protective Equipment for fire fighters	In the event of fire, wear self-contained breathing apparatus.
Specific hazards arising from the chemical	CAUTION: reignition may occur. Supports combustion. Water spray may be ineffective unless used by experienced firefighters. Do not allow run-off from fire fighting to enter drains or water courses. Hazardous decomposition products formed under fire conditions.
Hazchem Code	2W
Decomposition Temp.	No data available

6. Accidental release measures

Emergency Procedures	Evacuate personnel to safe areas. Only qualified personnel equipped with suitable protective equipment may intervene.
Methods and materials for containment and cleaning up	Prevent unauthorised persons entering the zone. Keep wetted with water. Soak up with inert absorbent material and dispose of as hazardous waste. Confinement must be avoided. Never return spills in original containers for re-use.
Personal Precautions	Use personal protective equipment. Wear respiratory protection. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental Precautions	Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.
Other Information	See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

7. Handling and storage

Precautions for Safe Handling	For personal protection see section 8. Avoid formation of aerosol. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage, including any incompatibilities	Prevent unauthorized access. No smoking. Keep in a well-ventilated place. Electrical installations / working materials must comply with the technological safety standards. Keep only in original container. Store away from other materials.
Storage Temperatures	Avoid temperatures below -30°C. If product freezes or separates, contact supplier. Maximum storage temperature: 40°C

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Additional information on precautions for use	<p>Fire and explosion prevention: Use explosion protected equipment. Keep away from sources of ignition - No smoking.</p> <p>No sparking tools should be used.</p> <p>Keep away from reducing agents (e.g. amines), acids, alkalies and heavy metal compounds (e.g. accelerators, driers, metal soaps).</p> <p>Do not cut or weld on or near this container even when empty.</p> <p>Keep away from combustible material.</p>
Other Information	<p>It is recommended to use electrical equipment of temperature group T3. However, autoignition can never be excluded. No decomposition if stored and applied as directed.</p>

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

Appropriate engineering controls	Explosion proof ventilation recommended. Effective exhaust ventilation system. Ensure that eyewash stations and safety showers are close to the workstation location.
Respiratory Protection	In the case of vapour or aerosol formation use a respirator with an approved filter. Filter A
Eye Protection	Tightly fitting safety goggles
Hand Protection	Wear face-shield and protective suit for abnormal processing problems. Wear suitable protective gloves of neoprene or synthetic rubber.
Body Protection	Protective suit
Hygiene Measures	Avoid contact with skin, eyes and clothing. When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product.
Other Information	Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.

9. Physical and chemical properties

Form	Liquid
Appearance	Clear, colourless.
Odour	Pungent.
Decomposition Temperature	No data available
Melting Point	-30 °C
Boiling Point	Decomposes.
Solubility in Water	Miscible at 20°C
Specific Gravity	No data available.
pH	Weakly acidic.
Vapour Pressure	4.0 hPa at 20°C
Evaporation Rate	No data available.

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Odour Threshold	No data available.
Partition Coefficient: n-octanol/water	No data available
Density	expected to be: approx.1,060 kg/m3
Flash Point	Above the SADT value, 100 °C The SADT is 70°C
Flammability	Decomposition products may be flammable.
Auto-Ignition Temperature	No data.
Explosion Limit - Upper	No data available
Explosion Limit - Lower	No data available
Explosion Properties	Not explosive
Oxidising Properties	Not applicable
Kinematic Viscosity	No data available.
Dynamic Viscosity	10.9 mPa.s at 20°C
Other Information	Active oxygen content: 9.1 - 9.5% Self-Accelerating decomposition temperature (SADT): 70 °C

10. Stability and reactivity

Reactivity	Stable under normal conditions.
Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	A high degree of confinement must be avoided. Heat, flames and sparks.
Incompatible Materials	Contact with the following incompatible materials will result in hazardous decomposition: Acids and bases, Iron, Copper, Reducing agents, Heavy metals, Rust Do not mix with peroxide accelerators, unless under controlled processing. Use only stainless steel 316, PP, polyethylene or glass-lined equipment. For queries regarding the suitability of other materials please contact the supplier.
Hazardous Decomposition Products	Acetophenone, 2-phenylisopropanol, methane.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Hazardous Polymerization	Polymerisation does not occur.
Other Information	Self-Accelerating decomposition temperature (SADT): 70 °C

11. Toxicological Information

Toxicology Information	Harmful if swallowed or in contact with skin. Toxic if inhaled.
Acute Toxicity - Oral	Acute toxicity estimate: 412.51 mg/kg Cumyl hydroperoxide: LD50, rat: 382mg/kg 2-phenylisopropanol: LD50, rat: 1300 mg/kg Cumene: LD50, rat: >2000 mg/kg Acetophenone: LD50: 301 - 2000 mg/kg
Acute Toxicity - Dermal	Acute toxicity estimate: 1,228 mg/kg Cumyl hydroperoxide: LD50: 1200 - 1520 mg/kg
Acute Toxicity - Inhalation	Acute toxicity estimate : 0.56 mg/l, 4h, Test atmosphere: dust/mist Cumyl hydroperoxide: LC50, 4h: 1370 mg/l

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Ingestion	Harmful if swallowed. Causes burns.
Inhalation	Inhalation of aerosols may cause irritation to mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours. Toxic if inhaled. May cause respiratory irritation.
Skin	Symptoms may be delayed. Harmful in contact with skin.
Eye	Causes severe skin burns. Causes serious eye damage.
Respiratory sensitisation	Respiratory sensitisation: Not classified based on available information.
Skin Sensitisation	Not classified based on available information.
Germ cell mutagenicity	Cumyl hydroperoxide: Not sensitising. Suspected of causing genetic defects . Cumyl hydroperoxide: Genotoxicity in vitro: Result: Evidence of genotoxic effects in vitro.
Carcinogenicity	May cause cancer by inhalation .
Reproductive Toxicity	Not classified based on available information.
STOT-single exposure	May cause respiratory irritation. Cumyl hydroperoxide: May cause respiratory irritation.
STOT-repeated exposure	Cumene: Exposure routes: Inhalation, May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure. Cumyl hydroperoxide: Exposure routes: Inhalation The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.
Aspiration Hazard	Not classified based on available information.
Serious eye damage/irritation	Causes serious eye damage. 2-phenylisopropanol: Irritating to eyes.
Skin corrosion/irritation	Causes severe burns. Cumyl hydroperoxide: Causes burns. Classification: Category 1B 2-phenylisopropanol: Irritating to skin.

12. Ecological information

Ecological Information	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.
Ecotoxicity	No data is available on the product itself.
Persistence and degradability	No data available on the product itself. Cumyl hydroperoxide: Not readily biodegradable. Cumene: Not readily biodegradable.
Mobility	No data available
Bioaccumulative Potential	No data is available on the product itself. Cumyl hydroperoxide: Bioconcentration Factor (BCF) = <1
Acute Toxicity - Fish	Cumyl hydroperoxide: LC50, Onchorhynchus mykiss, 96h: 3.9mg/l 2-Phenylisopropanol: No data available
Acute Toxicity - Daphnia	Cumyl hydroperoxide: EC50: 18.84 mg/l, 48 h Cumene: EC50: > 1 - 10 mg/l, 48h
Acute Toxicity - Algae	Cumyl hydroperoxide: EC50: 3.1 mg/l, 72h

13. Disposal considerations

Disposal Considerations	Dispose of waste according to applicable local, state and federal regulations.
Product Disposal	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used



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container.
Hazardous waste Dispose of contents/container in accordance with local regulation.

Container Disposal Empty remaining contents.
Dispose of as unused product.
Do not burn, or use a cutting torch on, the empty drum.
Due to the high risk of contamination recycling/recovery is not recommended.
Follow all warnings even after the container is emptied.

14. Transport information

Transport Information NZS 5433:2007 Transport of Dangerous Goods on Land & Dangerous Goods Rule 2005.

U.N. Number 3109

UN proper shipping name ORGANIC PEROXIDE TYPE F, LIQUID - (Cumyl hydroperoxide)

Transport hazard class(es) 5.2

Sub.Risk 8

Hazchem Code 2W

EPG Number 5M1

IERG Number 32

Marine Pollutant Yes

Other Information 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

Regulatory Information All components of this material are listed on or exempt from the New Zealand Inventory of Chemicals (NZIoC).

Poisons Schedule Not Scheduled

HSNO Approval Number HSR100055

AICS (Australia) All components of this material are listed on or exempt from the Australian Inventory of Chemical Substances (AICS).

16. Other Information

Contact Person/Point An electronic version of this SDS is available at www.imcdgroup.com

Other Information ADG Code: Australian Code for the Transport of Dangerous Goods by Road and 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



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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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