RAI Products
Traffic Control and ITS Solutions

SAFETY DATA SHEET

Revision date 23-Feb-2018 **Version** 3 **Supersedes Date:** 23-Feb-2018

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Code 30019R.01

Product Name PRO-SEAL 1oz KP Catalyst

Other means of identification

No information available

Recommended use of the chemical and restrictions on use

Hardener, Fillers and putty

Details of the supplier of the safety data sheet

See section 16 for more information

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Section 2: HAZARDS IDENTIFICATION

Classification

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Flammable liquids	Category 4

Label elements

Signal word **DANGER**

HAZARD STATEMENTS
Combustible liquid
Harmful if swallowed
Causes severe skin burns and eye damage

PREVENTION
Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dusts or mists. Wear protective gloves/protective clothing/eye protection/face protection. P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

RESPONSE
Get medical advice/attention if you feel unwell.

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Skin
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor/physician.

Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting.

Fire
In case of fire: Use CO2, dry chemical, or foam for extinction.

STORAGE
Store locked up. Store in a well-ventilated place. Keep cool.

DISPOSAL
Dispose of contents/containers in accordance with local regulations.

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC)
No information available.

OTHER HAZARDS
Not applicable.

UNKNOWN ACUTE TOXICITY 0% of the mixture consists of ingredient(s) of unknown toxicity.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	weight-%
Methyl ethyl ketone peroxide	1338-23-4	10 - 25
Peroxycyclohexanone	12262-58-7	5 - 10
Hydrogen peroxide	7722-84-1	1 - 3
Methyl ethyl ketone	78-93-3	1 - 3
2,4-Pentanediol, 2-methyl-	107-41-5	1 - 3

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4: FIRST AID MEASURES

First Aid Measures

General advice
Get medical advice/attention if you feel unwell.

Eye contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Skin Contact
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor/physician.

Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media
Dry chemical, CO2, water spray or alcohol-resistant foam.

Not to be used for safety reasons: Strong water jet

Specific hazards arising from the chemical
Burning produces heavy smoke. Fire may produce irritating and/or toxic gases. In the event of fire and/or explosion do not breathe fumes.

Special protective equipment for fire-fighters
Wear self-contained breathing apparatus and protective suit. Cool containers with flooding quantities of water until well after fire is out. Do not allow run-off from fire-fighting to enter drains or water courses.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Avoid breathing vapors or mists. Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak. Remove all sources of ignition.

For emergency responders
Use personal protection recommended in Section 8.

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Dispose of waste product or used containers according to local regulations. Clean with detergents. Avoid solvent cleaners. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

Section 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling
Operators should wear anti-static footwear and clothing and floors should be of the conducting type. Use personal protection recommended in Section 8. Never use pressure to empty container. Comply with the health and safety at work laws. Prevent product from entering drains. Use only with adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray. Use only in well-ventilated areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges.

General Hygiene Considerations
When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep/store only in original container. Store in accordance with local regulations. Keep unauthorized personnel away. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep container tightly closed in a dry and well-ventilated place. Keep tightly closed in a dry and cool place.

Incompatible materials
Bases. Strong bases. Strong oxidizing agents. Strong acids. Reducing agent.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits
If S* appears in the OEL table, it indicates this chemical contains a skin notation.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methyl ethyl ketone peroxide 1338-23-4	Ceiling: 0.2 ppm		Ceiling: 0.2 ppm Ceiling: 1.5 mg/m^3
Hydrogen peroxide 7722-84-1	TWA: 1 ppm	TWA: 1 ppm TWA: 1.4 mg/m^3	IDLH: 75 ppm TWA: 1 ppm TWA: 1.4 mg/m^3
Methyl ethyl ketone 78-93-3	STEL: 300 ppm TWA: 200 ppm	TWA: 200 ppm TWA: 590 mg/m^3	IDLH: 3000 ppm TWA: 200 ppm TWA: 590 mg/m^3 STEL: 300 ppm STEL: 885 mg/m^3
2,4-Pentanediol, 2-methyl- 107-41-5	Ceiling: 25 ppm		Ceiling: 25 ppm Ceiling: 125 mg/m^3

Appropriate engineering controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas. Provide local exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection
Face protection shield. Tight sealing safety goggles.

Skin and body protection
Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Hand Protection
There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical / chemical damage and poor maintenance. Wear protective gloves.

Respiratory protection
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal Protection
No information available

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid
Appearance	No information available
Odor	Organic
Color	dark red
Odor Threshold	No information available
pH value	No information available
Melting point/freezing point	No information available
Boiling point / boiling range	No information available °C / °F
flash point	77 °C / 171 °F
evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor Pressure	No information available
vapor density	No information available
Density (lbs per US gallon)	9.16
specific gravity	1.1
Solubility(ies)	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available

Other information

Section 10: STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	None under normal processing.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Bases. Strong bases. Strong oxidizing agents. Strong acids. Reducing agent.

Hazardous Decomposition Products Carbon monoxide. Carbon dioxide (CO2). Hydrocarbons.

Section 11: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact
Causes serious eye damage
Skin Contact
Causes skin burns
Ingestion
Harmful if swallowed
Inhalation
Not applicable

Numerical measures of toxicity - Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Methyl ethyl ketone peroxide 1338-23-4	= 407 mg/kg (Rat) = 470 mg/kg (Rat)	-	= 200 ppm (Rat) 4 h
Peroxycyclohexanone 12262-58-7	-	-	-
Hydrogen peroxide 7722-84-1	= 1518 mg/kg (Rat)	= 4060 mg/kg (Rat) = 2000 mg/kg (Rabbit)	= 2 g/m³ (Rat) 4 h
Methyl ethyl ketone 78-93-3	= 2483 mg/kg (Rat) = 2737 mg/kg (Rat)	= 5000 mg/kg (Rabbit) = 6480 mg/kg (Rabbit)	= 11700 ppm (Rat) 4 h
2,4-Pentanediol, 2-methyl- 107-41-5	= 3700 mg/kg (Rat)	= 8560 µL/kg (Rabbit)	> 310 mg/m³ (Rat) 1 h

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 1473 Mg/kg
ATEmix (inhalation-dust/mist) 50.1 mg/l
ATEmix (inhalation-vapor) 367 mg/l

UNKNOWN ACUTE TOXICITY 0% of the mixture consists of ingredient(s) of unknown toxicity.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydrogen peroxide 7722-84-1	A3			

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen.

Skin corrosion/irritation Causes skin burns
Serious eye damage/eye irritation Causes serious eye damage
Skin sensitization Not applicable
Respiratory sensitization Not applicable
Germ cell mutagenicity Not applicable
Carcinogenicity Not applicable
Reproductive Toxicity Not applicable
Specific target organ toxicity (single exposure) Not applicable
Specific target organ toxicity (repeated exposure) Not applicable
Aspiration hazard Not applicable

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity
Environmental precautions Prevent product from entering drains.

Persistence and degradability
No information available

Bioaccumulation
No information available

Mobility
No information available

Other adverse effects No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

Section 14: TRANSPORT INFORMATION

	DOT	IMDG	IATA
14.1 UN/ID no	UN1760	UN1760	UN3105
14.2 Proper shipping name	Corrosive liquid, n.o.s Methyl ethyl ketone peroxide Peroxycyclohexanone	Corrosive liquid, n.o.s Methyl ethyl ketone peroxide Peroxycyclohexanone	Corrosive liquid, n.o.s Methyl ethyl ketone peroxide Peroxycyclohexanone
14.3 Hazard Class	8	8	8
14.4 Packing Group	II	II	
14.5 Environmental hazard			
14.6 Special Provisions	B2, IB2, TII, TP2, TP27 **Emergency Response Guide Number** 154	274 **EmS-No** F-A, S-B	A3, A803

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

The supplier may apply one of the following exceptions: Combustible Liquid (49 CFR 173.150(f)); Consumer Commodity (49 CFR 173.150(c), ICAO/IATA SP A112); Limited Quantity (49 CFR 173.150(b), ICAO Part 3 Chapter 4, IATA 2.7, IMDG Chapter 3.4); Viscous Liquid (49 CFR 173.121(b), IMDG 2.3.2.2, IATA 3.3.3.1.1, ICAO 3.2.2, ADR 2.2.3.1.5); Does Not Sustain Combustion (49 CFR 173.120(a), IATA 3.3.1.3, ICAO 3.1.3, IMDG 2.3.1.3, ADR 2.2.3.1.1 Note 1); or others as allowed under hazardous materials/dangerous goods regulations.

Section 15: REGULATORY INFORMATION

International Inventories

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory — All components are listed or exempt from listing.

DSL - Canadian Domestic Substances List — Not all components are listed or exempt from listing

US Federal Regulations

Chemical Name	SARA 313 - Threshold Values %	Metals	Hazardous air pollutants (HAPs) content
Dimethyl phthalate 131-11-3 25 - 50	1		Present

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	Yes

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)

Methyl ethyl ketone peroxide 1338-23-4	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ
Hydrogen peroxide 7722-84-1		1000 lb	
Methyl ethyl ketone 78-93-3	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

Rule 66 status of product
Not photochemically reactive.

U.S. EPA Label information
EPA Pesticide registration number Not applicable

U.S. State Right-to-Know Regulations

Chemical Name
Dimethyl phthalate 131-11-3
Methyl ethyl ketone peroxide 1338-23-4
Proprietary Non-Hazardous Ingredient - Proprietary CAS
Peroxycyclohexanone 12262-58-7
Hydrogen peroxide 7722-84-1
2,4-Pentanediol, 2-methyl- 107-41-5
Methyl ethyl ketone 78-93-3

Section 16: OTHER INFORMATION

HMIS

Health hazards	3
Flammability	2
Physical hazards	1
Personal Protection	X

Prepared By Regulatory Department

Revision date 23-Feb-2018
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Disclaimer

The information on this Safety Data Sheet (SDS) is based on the present state of our knowledge, current national legislation and guidelines. As the specific conditions of use of the product are outside the supplier's knowledge and control the user is responsible for ensuring that the requirements of relevant legislation are complied with. This SDS should not be construed as any guarantee of the technical performance or suitability for particular applications. UNLESS SUPPLIER AGREES OTHERWISE IN WRITING, SUPPLIER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT. SUPPLIER WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

End of Safety Data Sheet