

15. APPENDIX "A" (MATERIAL SAFETY DATASHEETS)

FIREPRO SYSTEMS LTD.

FirePro

SAFETY DATA SHEET - SDS

Issue date: 26/11/2018

1. Identification of the Substance/Company	
1.1	Trade Name FirePro
1.2	Manufacturer/Supplier
	FirePro Systems Ltd 8 Faleas Str., Agios Athanasios Industrial Area CY4101 Limassol CYPRUS
	Phone: + 357 25 379999 Fax: + 357 25 354432
	Email: mail@firepro.com Website: www.firepro.com
1.3	Telephone number in case of emergency: +357 25 376146

2. Hazards Identification			
<ul style="list-style-type: none"> - Hazards for humans related to the FPC Solid Compound has not been found - Hazards for humans related to the aerosol released by the solid compound have not been established because TLV's are not applicable. <p>Signs and symptoms related to the aerosol phase are only referred to acute exposure and/or chronic overexposures, while in real life the exposure will be very short (i.e. in the event of an accidental discharge when people were not evacuated on time)</p>			
For humans			
Threshold Limit Values None established			
Signs and Symptoms by acute exposure			
Eye Contact At normal contact no injury			
Inhalation Not a likely route of entry			
Skin Contact At normal contact no injury			
Ingestion At normal contact no injury			
Chronic Overexposure At normal contact no injury			
Medical Conditions generally aggravated by Exposure None known			
The EU Classification and Hazard and Precautionary Statements as per CLP 1272/2008 referring to the components of the FPC Compound are related only to the single components considered as separate chemical entities. Once mixed in the production of the FPC Compound , the statements of the single components are not applicable being the FPC Compound a separate chemical entity.			
Product			
2.1	Potassium Nitrate		
	EU Classification	Oxidizer	-
	Hazard Statements	H270	Contact with combustible material may cause or intensify fire
	Precautionary Statements	P210	Keep away from sources of ignition – No Smoking
		P370+P260	In case of fire and/or explosion, do not breathe fumes
	Potassium Carbonate	EU Classification	Irritant
Hazard Statements	H302	Harmful if swallowed	
	H320+H335+H315	Irritating to eyes, respiratory system and skin	
Precautionary Statements	P305+P351+H338	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice	
	P282	Wear suitable gloves and eye/face protection	

2.1	Magnesium	EU Classification	Flammable	-
		Hazard Statements	H260	Contact with water liberates highly flammable gases
			H250	Spontaneously flammable in air.
		Precautionary Statements	P102	Keep out of reach of children
			P223	In case of fire never use water
			P402+P404	Keep container tightly closed and dry
	Epoxy Resin Polymer	EU Classification	Irritant	-
		Hazard Statements	H317	May cause sensitization by skin contact
			H413	May cause long-term adverse effects in the aquatic environment
		Precautionary Statements	P302+P352	In case of contact with skin , rinse with water
P282	Wear suitable gloves and eye/face protection			
P273	Avoid release to the environment. Refer to special instructions/Safety Data Sheets			

3.	Composition/Information on Ingredients			
3.1	Component	Wt %	CAS No.	EINECS
	Potassium Nitrate	77	7757-79-1	231-818-8
	Potassium Carbonate	4	584-08-7	209-529-3
	Magnesium	<1	7439-95-4	231-104-6
	Epoxy Resin Polymer	18	25068-38-6	Any "polymerizate, polycondensate, or polyadduct" is exempted by 81/437/EEG

4.	First-Aid Measures	
	First-Aid measures are referred to accute exposure and/or chronic over exposure	
4.1	Inhalation	Remove from exposure area to fresh air.
	Eye Contact	If necessary wash eyes.
	Skin Contact	Change clothing and shoes. Wash skin with soap.
	Ingestion	Not likely.

5.	Fire fighting Measures	
5.1	Extinguishing Media	This is an Extinguishing Agent
5.2	Unusual Fire and Explosion Hazards	The material does not present an explosion danger. It can be ignited by means of a fire. Hot aerosol is present in the close up area of the outlets.
5.3	Special Procedures	In places where there is a fire always wear personal protecting equipment and clothing

6.	Accidental Release Measures	
6.1	Personal Precautions	
	Respiratory Protection	at normal contact not needed
	Hand Protection	at normal contact not needed
	Eye Protection	at normal contact not needed
	Skin and Body Protection	at normal contact not needed
6.2	Environmental Precautions	
	Waste Disposal Methods	See section 13
6.3	Clean up Precautions	Sweep up

7.	Handling and Storage	
7.1	Handling Precautions	Avoid contact with combustible materials
7.2	Storage Precautions	Should be stored in original container. Keep dry.
	Storage Class	9 Miscellaneous , solid

8.	Exposure Controls and Personal Protection	
8.1	Exposure	Before entering a room with the material in aerosol phase vent properly to avoid unnecessary exposure.
8.2	Personal Protection	
	Respiratory Protection	at normal contact not needed
	Hand Protection	at normal contact not needed
	Eye Protection	at normal contact not needed
	Skin and Body Protection	at normal contact not needed

9.	Physical and Chemical Characteristics	
	Appearance	Solid
	Colour	Off white
	Odour	None
	Relative Density	Not applicable
	Solubility in water	Insoluble
	Ph (if in water, % Conc.)	Not determined
	Boiling Point	Not applicable
	Vapour Pressure (mm Hg)	Not applicable
	Vapour Density	Not applicable
	Flash Point	Not applicable
	Flammability Limits in Air (% by Volume)	Not applicable
	Auto Flammability	Not applicable
	Explosive Properties	Not applicable
	Oxidizing Properties	Not determined

10.	Stability and Reactivity	
10.1	Stability	Stable
	Conditions to avoid	None Known
10.2	Hazardous Reactions	Will not occur
	Conditions to avoid	None known
10.3	Materials to avoid	None known
10.4	Hazardous Decompositions Products	None ascertained

11.	Toxicological Information		
	The TLV's (Threshold Limit Values) of the chemicals released in the aerosol phase are applicable only in case of long , as long as a complete professional life, exposure. This is not the case of a real life situation.		
11.1	Product The potential damage is not caused by the product mixture composition, but by the fact that it is respirable. The TLV's apply in case of long exposure , sometimes exposure during a complete professional life , whilst in this case is once only and short (in case of accidental discharge when evacuation does not take place on time) In case of fire the toxicity is caused by the fire itself and the products involved in the fire		
11.2	Components		
	Potassium Nitrate	Toxicity	Oral LD ₅₀ (rat) 3750 mg/Kg
		Target Organs	Blood, central nervous system
	Potassium Carbonate	Toxicity	Oral LD ₅₀ (rat) 1870 mg/Kg , Oral LD ₅₀ (mouse) 2570 mg/Kg
		Target Organs	Respiratory system
	Magnesium	Toxicity	Oral LD ₅₀ (dog) 230 mg/Kg
		Target Organs	Central nervous system, liver, kidneys
11.2	Epoxy Resin Polymer	Toxicity	Oral LD ₅₀ (rat) 11.4 g/Kg
		Irritation Data	Skin (guinea pig) 2750 mg/55 days Inert Eye (rabbit) 100 mg Mild

12.	Ecological Information	
12.1	Mobility	as per available data no effect
	Absorption/Desorption	as per available data no effect
12.2	Degradability	as per available data no effect
	Biotic and Abiotic Degradation	as per available data no effect
	Aerobic and Anaerobic Degradation	as per available data no effect
	Persistence	as per available data no effect
12.3	Accumulation	as per available data no effect
	Bioaccumulation Potential	as per available data no effect
	Biomagnification	as per available data no effect
12.4	Short and Long Term Effects on	
	Ecotoxicity	as per available data no effect
	Aquatic Organisms	as per available data no effect
	Soil Organisms	as per available data no effect
	Plants and Terrestrial animals	as per available data no effect
12.5	Other Adverse Effects	
	Ozone Depleting Potential (ODP)	none
	Photochemical Ozone Creation Potential	none
	Global Warming Potential (GWP)	none
	Effects on Waste Water Treatment Plants	as per available data no effect

13.	Disposal Considerations	
13.1	Dispose of in Compliance with local, state and national regulations	

14.	Transport Information			
14.1	Air Transport (ICAO-IATA / DGR)			
	UN Number	3335		
	UN proper shipping name	Aviation regulated solid, n.o.s.* (contains potassium nitrate)		
	Transport Hazard class	ICAO / IATA Class	9	
		ICAO / IATA Subrisk	Not Applicable	
	Environmental hazard	Not Applicable		
	Special Precautions for user	Cargo Only Packing Instructions	956	
		Cargo Only Maximum Qty/Pack	400 kg	
		Passengers and Cargo Packing Instructions	956	
		Passenger and Cargo Maximum Qty / Pack	400 kg	
		Passenger and Cargo Limited Quantity Packing Instructions	Y956	
		Passenger and Cargo Limited Maximum Qty / Pack	30 kg G	
	14.2	Sea Transport (IMDG – Code)		
		UN Number	Not Applicable	
Packing Group		Not Applicable		
UN proper shipping name		Not Applicable		
Environmental hazard		Not Applicable		
Transport hazard (classes)		IMDG Class	Not Applicable	
		IMDG Subrisk	Not Applicable	
Special precautions for user		EMS Number	Not Applicable	
	Special provisions	960 (Not Subject to the provisions of this Code but may be subject to provisions governing the transport of dangerous goods by other modes).		
	Limited Quantities	Not Applicable		
14.3	Land transport (ADR)			
	UN Number	Not Applicable		
	Packing Group	Not Applicable		
	UN proper shipping name	Not Applicable		
	Environmental hazard	Not Applicable		
	Transport hazard class(es)	Class	Not Applicable	
		Subrisk	Not Applicable	
	Special precautions for user	Special provisions	106 (Not Subject to ADR)	
Limited quantity		Not Applicable		

15.	Regulatory Information		
	Limit Values for exposure	None listed	
	EINECS Status	All components are included in EINECS inventories	
	Restrictions on Marketing and Use	None (Refer to any other national measures that may be relevant)	

16.	Other Information		
16.1	None Known		

Disclaimer

The data in the above safety data sheet reflect the current state of knowledge of our product and shall be used only as a guideline. No binding statements as to the contractually agreed product characteristics may be inferred there from.

Manual No.	Version	Revision	Date of issue	Page
EX 6960	1.0	7.0	February 2019	59 of 68