
1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the preparation

Product Name: "MICRO-K"
Chemical Name: N/A – This is a mixture/preparation.
CAS No.: N/A – This is a mixture/preparation.
Chemical Formula: N/A – This is a mixture/preparation.
EINECS Number: N/A – This is a mixture/preparation.

1.2. Use of the preparation

The intended or recommended use of this preparation is as a FIRE EXTINGUISHING AGENT.

1.3. Company identification

Manufacturer/Supplier: ANSUL INCORPORATED
Address: One Stanton Street, Marinette, WI 54143-2542
Prepared by: Safety and Health Department
Phone: 715-735-7411
Internet/Home Page: <http://www.ansul.com>
Date of Issue: March, 2004

1.4. Emergency telephone

CHEMTREC 800-424-9300 or 703-527-3887

2. COMPOSITION/INFORMATION ON INGREDIENTS

2.1. Ingredient Name: Potassium Nitrate.
Chemical Formula: KNO_3 .
CAS No.: 7757-79-1.
EINECS Number: 231-818-8.
Concentration, Wt %: 75 %.
Hazard Identification: See Heading 3.

Ingredient Name: Magnesium.
Chemical Formula: Mg.
CAS No.: 7439-95-4.
EINECS Number: 231-104-6.
Concentration, Wt %: 2 %.
Hazard Identification: See Heading 3.

Ingredient Name: Epoxy Resin Polymer.
Chemical Formula: Bisphenol A diglycidyl ether resin.
CAS No.: 25068-38-6.
EINECS Number: (a).
Concentration, Wt %: 23 %.
Hazard Identification: See Heading 3.

(a) EINECS does not include synthetic polymers (These are registered in EINECS under their building blocks, monomers.).
See: 67/548/EEC, article 13; 79/831/EC; and 81/437/EC.

NOTE: Unless a component presents a severe hazard, it does not need to be considered in the MSDS if the concentration is less than 1%. [According to Directive 1999/45/EC.]

3. HAZARDS IDENTIFICATION

FOR HUMANS:

Product:

EU Classification:		Oxidizer – Harmful.
R Phrases	8	Contact with combustible material may cause fire.
	22	Harmful if swallowed.
	36/37/38	Irritating to eyes, respiratory system and skin.
	43	May cause sensitization by skin contact.
S Phrases	7	Keep container tightly closed.
	16	Keep away from sources of ignition – No smoking.
	17	Keep away from combustible material.
	28	After contact with skin, wash immediately with plenty of water.
	37/39	Wear suitable gloves and eye/face protection.

Components:

Potassium nitrate:

EU Classification:		Oxidizer.
R Phrases	8	Contact with combustible material may cause fire.
	22	Harmful if swallowed.
	36/37/38	Irritating to eyes, respiratory system and skin.
S Phrases	7	Keep container tightly closed.
	16	Keep away from sources of ignition – No smoking.
	17	Keep away from combustible material.

Epoxy Resin Polymer:

EU Classification:		Harmful.
R Phrases	36/38	Irritating to eyes and skin.
	43	May cause sensitization by skin contact.
S Phrases	28	After contact with skin, wash immediately with plenty of water.
	37/39	Wear suitable gloves and eye/face protection.

Limit Values for Exposure:

Nuisance dust limit:	OSHA TWA:	15 mg/m ³ .
	ACGIH TLV-TWA:	10 mg/m ³ .
General limit dust:	MAK:	4 mg/ m ³ .
	BAT:	4 mg/ m ³ .

Neither this preparation nor the substances contained in it have been listed as carcinogenic by National Toxicology Program, I.A.R.C., or OSHA.

AS PART OF GOOD INDUSTRIAL AND PERSONAL HYGIENE AND SAFETY PROCEDURE, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes, and clothing.

SIGNS AND SYMPTOMS:

Acute Exposure:

Eye Contact:	May cause redness and pain.
Skin Contact:	May cause redness.
Inhalation:	Can be irritating to mucous membranes.
Ingestion:	Large doses may cause nausea and vomiting with tenesmus.

Chronic Overexposure: Blood and central nervous system.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known.

FOR ENVIRONMENT:

Keep from entering surface water. For harm to the environment see Heading 12.

4. FIRST AID MEASURES

Eye Contact:	Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention.
Skin Contact:	Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts of water until no evidence of chemical remain. Get medical attention immediately.
Inhalation:	Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Get medical attention immediately.
Ingestion:	Remove by gastric lavage or emesis. Maintain blood pressure and airway. Give oxygen if respiration is depressed. Do not perform lavage or emesis if victim is unconscious. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

This preparation is an extinguishing media.

There are NO extinguishing media which must not be used for safety reasons. If material is involved in a fire, use agent appropriate for material around this product.

Relative to special protective equipment needed for fire-fighters. Material will generate an aerosol under conditions of fire which will be irritating and may be toxic.

For personal protection: Prevent skin and eye contact, see Heading 8.

Material is classified as a 5.1 oxidizer under US DOT regulations and may accelerate combustion.

6. ACCIDENTAL RELEASE MEASURES

This preparation, if spilled, is a hazardous waste. It is an oxidizer.

For personal protection: Prevent skin and eye contact, see Heading 8.

Clean up: Sweep up and reuse or place in a closed container for disposal, see Heading 13.

Keep from entering surface water. For harm to the environment see Heading 12.

7. HANDLING AND STORAGE

7.1. Handling

Care should be taken in handling all chemical substances and preparations.

Do not mix with other extinguishing agents.

Avoid contact with combustible materials.

See incompatibility information in Heading 10.

7.2. Storage

Avoid contact with combustible materials.

See incompatibility information in Heading 10.

Storage Class (VCI): 5.1 B (Oxidizing agents (TRG 515 Groups 2 + 3))

Store in original container. Keep tightly closed until used.

Keep from entering surface water. For harm to the environment see Heading 12.

7.3. Specific use

The intended or recommended use of this preparation is as a FIRE EXTINGUISHING AGENT.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure limit values

Limit Values for Exposure:

Nuisance dust limit:	OSHA TWA:	15 mg/m ³ .
	ACGIH TLV-TWA:	10 mg/m ³ .
General limit dust:	MAK:	4 mg/ m ³ .
	BAT:	4 mg/ m ³ .

8.2. Exposure controls

8.2.1. Occupational exposure controls

8.2.1.1. Respiratory protection

Mechanical ventilation is preferred.

Dust mask where dustiness is prevalent, or TLV is exceeded. Use mechanical filter respirator if exposure is prolonged.

8.2.1.2. Hand protection

Use chemical resistant gloves when handling the preparation.

8.2.1.3. Eye protection

Chemical goggles recommended as mechanical barrier for prolonged exposure.

8.2.1.4. Skin protection

Standard fire fighting equipment should provide all protection which is necessary.

8.2.2. Environmental exposure controls

Keep from entering surface water. For harm to the environment see Heading 12.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information

Appearance: White to light grey
 Odor: None.

9.2. Important health, safety, and environmental information

pH: Not applicable.
 Boiling point/boiling range: Not applicable.
 Flash point: None.
 Flammability (solid/gas): Not flammable.
 Explosive properties: Not explosive.
 Oxidizing properties: An oxidizer.
 Vapor Pressure: Not applicable.
 Relative Density (Water = 1): Not applicable.
 Solubility:
 – Water solubility: Partially soluble.
 – Fat solubility: Not soluble.
 Partition coefficient, n-octanol/water: Not determined.
 Viscosity: Not applicable.
 Vapor density (Air = 1): Not applicable.
 Evaporation rate
 (Butyl Acetate = 1): Not applicable.

9.3. Other information

Auto-ignition temperature: Does not ignite.

10. STABILITY AND REACTIVITY

10.1. Conditions to avoid

On contact with hot surfaces potassium nitrate decomposes forming nitrogen oxides and oxygen, which increase fire danger.

10.2. Materials to avoid

Potassium nitrate is a strong oxidizer and reacts at high temperatures with combustible and reducing materials. Reacts violently with aluminum, aluminum oxide, and acetic anhydride causing fire and explosion hazard.

10.3. Hazardous decomposition products

Hazardous polymerization will NOT occur.
 Combustion or decomposition products include NO_x, K₂O, CO.

11. TOXICOLOGICAL INFORMATION

Product:

The toxicity of the product mixture has not been determined.

Components:

Potassium Nitrate:

Toxicity Data: Oral LD₅₀ (rat) 3750 mg/kg.
 Target Organs: Blood, central nervous system.

Magnesium:

Toxicity Data: Oral LD_{LO} (dog) 230 mg/kg
 Target Organs: Central nervous system, liver, and kidneys.

Epoxy Resin Polymer:

Irritation Data: Skin (guinea pig) 2750 mg/55 days Inert
 Eye (rabbit) 100 mg Mild
 Toxicity Data: Oral LD₅₀ (rat) 11.4 g/kg.

12. ECOLOGICAL INFORMATION**12.1. Ecotoxicity**

Components:

Potassium Nitrate:

Fish	Poecilia reticulata	LC ₅₀ (24 hr)	1927 mg/L.
Fish	Poecilia reticulata	LC ₅₀ (96 hr)	1378 mg/L.
Crustacea	Daphnia magna	TLm (24 hr)	490 mg/L.

12.2. Mobility

Not determined.

12.3. Persistence and degradability

Not determined.

12.4. Bioaccumulative potential

Not determined.

12.5. Other adverse effects

Ozone depletion potential:	None.
Photochemical ozone creation potential:	None
Global warming potential:	None

13. DISPOSAL CONSIDERATIONS

This preparation, if spilled, is a hazardous waste. It is an oxidizer.

Keep from entering surface water. For harm to the environment see Heading 12.

Dispose of in compliance with national, regional, and local provisions that may be in force.

14. TRANSPORT INFORMATION

Hazard Class or Division: 5.1 Oxidizer.

UN Number 1479.

For additional transport information, contact Ansul Incorporated.

Keep from entering surface water. For harm to the environment see Heading 12.

15. REGULATORY INFORMATION

Product:

EU Classification:		Oxidizer – Harmful.
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Limit Values for Exposure:

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General limit dust:	MAK:	4 mg/ m ³ .
	BAT:	4 mg/ m ³ .

EINECS Status: All components are included in EINECS inventories or are exempt from listing.

EPA TSCA Status: All components are included in TSCA inventories or are exempt from listing.

Canadian DSL (Domestic Substances List): All components are included in the DSL or are exempt from listing.

Environmental restrictions: Hazardous waste if spilled.

Restrictions on Marketing and Use: None are known.

Refer to any other national measures that may be relevant.

16. OTHER INFORMATION

(HMIS) HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS:

HEALTH:	<u>1</u>	4. Severe Hazard
FLAMMABILITY:	<u>1</u>	3. Serious Hazard
REACTIVITY:	<u>0</u>	2. Moderate Hazard
		1. Slight Hazard
		0. Minimal Hazard

(WHMIS) CANADIAN WORKPLACE HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS:

This product is rated **D2B – Product may cause irritation to skin, eyes, or mucous membranes.**

Format is from directive 2001/58/EC.

EINECS data is from <http://exb.jrc.it/existing-chemicals/>

Data used to compile the data sheet is from Ansul Material Safety Data Sheet, February, 2002.

The EU Classification has been changed in accordance with Directive 1999/45/EC and information in the EINICS ESIS files (Existing Substances Information System).

Toxicological information added from the EINICS ESIS (Existing Substances Information System).

A rating under WHMIS has been added, following the Canadian guidelines.

Limit values for exposure for dust were changed, based on EINICS ESIS data.

17. DISCLAIMER

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