SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture	Adex-K
Registration number	-
Synonyms	None.
Issue date	14-February-2014
Version number	01
Revision date	-
Supersedes date	-

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Firefighting Powder for use on Class A, B, C and E fires.
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name	UTC CCS Manufacturing Polska sp.z o.o.
Address	ul.Kolejowa 24, 39-100 Ropczyce, Poland
Telephone	0048 (17) 22 10 211
Fax	0048 (17) 22 10 230
e-mail	msds-rop@fs.utc.com
Contact person	EHS Specialist
Emergency number in the EU	112

1.4. Emergency telephone number 0048 667 660 611

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

This preparation does not meet the criteria for classification according to Directive 1999/45/EC as amended.

Classification according to Regulation (EC) No 1272/2008 as amended

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

Hazard summary

Physical hazards	Not classified for physical hazards.
Health hazards	Not classified for health hazards.
Environmental hazards	Not classified for hazards to the environment.
Specific hazards	Dusts may irritate the respiratory tract, skin and eyes. Prolonged and repeated overexposure to dust can lead to chronic bronchitis and chronic lung inflammation.
Main symptoms	Irritation of nose and throat. Irritation of eyes and mucous membranes.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Hazard pictograms	None.
Signal word	None.
Hazard statements	The mixture does not meet the criteria for classification.

Precautionary statements

Prevention	Observe good industrial hygiene practices.
Response	P314 - Get medical advice/attention if you feel unwell.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.

Supplemental label information None.

2.3. Other hazards Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Ammonium sulphate	64 - 70	7783-20-2 231-984-1	-	-	
Classification: **DSD:** - **CLP:** -					
Mica	> 2	12001-26-2 -	-	-	
Classification: **DSD:** - **CLP:** -					
Ammonium dihydrogenorthophosphate	20 - 23	7722-76-1 231-764-5	-	-	
Classification: **DSD:** - **CLP:** -					

#: This substance has workplace exposure limit(s).
DSD: Directive 67/548/EEC.
CLP: Regulation No. 1272/2008.

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation Dust irritates the respiratory system, and may cause coughing and difficulties in breathing. If symptomatic, move to fresh air. Get medical attention if symptoms persist.

Skin contact Contact with dust: Wash area with soap and water. Get medical attention if irritation develops or persists.

Eye contact Dust in the eyes: Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed Irritation of nose and throat. Irritation of eyes and mucous membranes. Coughing.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards Product is an extinguishing medium. It does not burn or support combustion.

5.1. Extinguishing media

Suitable extinguishing media No specific measures are required as this product is a fire extinguishing medium.

Unsuitable extinguishing media Not applicable.

5.2. Special hazards arising from the substance or mixture Not a fire hazard.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus, operated in positive pressure mode and full protective clothing must be worn in case of fire.

Special fire fighting procedures No specific precautions.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Avoid inhalation of dust and contact with skin and eyes.
For emergency responders	Avoid formation of dust. Use personal protection recommended in section 8 of the SDS.
6.2. Environmental precautions	Avoid discharge to the aquatic environment.
6.3. Methods and material for containment and cleaning up	Vacuum up the spilled material. Vacuums used for this purpose should be equipped with HEPA filters. For waste disposal, see section 13 of the SDS.
6.4. Reference to other sections	For waste disposal, see section 13 of the SDS. For personal protection, see section 8 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Use work methods which minimise dust production. Use only in well-ventilated areas. Avoid inhalation of dust and contact with skin and eyes. Wear appropriate personal protective equipment. Wash hands after handling. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Store in original container. Store in a cool, dry, well-ventilated place. Store extinguisher in an upright position not more than three high. Store away from incompatible materials. Read and follow manufacturer's recommendations.
7.3. Specific end use(s)	Firefighting Powder for use on Class A, B, C and E fires.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List

Components	Type	Value	Form
Mica (CAS 12001-26-2)	MAK	10 mg/m3	Inhalable fraction.

Belgium. Exposure Limit Values.

Components	Type	Value
Mica (CAS 12001-26-2)	TWA	3 mg/m3

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value	Form
Ammonium sulphate (CAS 7783-20-2)	TWA	10 mg/m3	
Mica (CAS 12001-26-2)	TWA	6 mg/m3	Inhalable fraction.
		3 mg/m3	Respirable fraction.

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value
Mica (CAS 12001-26-2)	MAC	0,8 mg/m3

Czech Republic. OELs. Government Decree 361

Components	Type	Value	Form
Mica (CAS 12001-26-2)	TWA	10 mg/m3	Total dust.
		10 mg/m3	Respirable dust.

France

Components	Type	Value	Form
Ammonium sulphate (CAS 7783-20-2)	VME	5 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.

Germany

Components	Type	Value	Form
Ammonium sulphate (CAS 7783-20-2)	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.

Ireland. Occupational Exposure Limits

Components	Type	Value	Form
Mica (CAS 12001-26-2)	TWA	10 mg/m3	Total inhalable dust.
		0,8 mg/m3	Respirable dust.

Italy. OELs

Components	Type	Value	Form
Mica (CAS 12001-26-2)	TWA	3 mg/m3	Respirable fraction.

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value
Ammonium sulphate (CAS 7783-20-2)	TWA	0,02 mg/m3

Portugal

Components	Type	Value	Form
Ammonium sulphate (CAS 7783-20-2)	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Components	Type	Value	Form
Mica (CAS 12001-26-2)	TWA	3 mg/m3	Respirable fraction.

Slovakia. OELs. Decree of the government of the Slovak Republic concerning protection of health in work with chemical agents

Components	Type	Value	Form
Mica (CAS 12001-26-2)	TWA	2 mg/m3	Respirable fraction.
		10 mg/m3	Total

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value	Form
Mica (CAS 12001-26-2)	TWA	2 mg/m3	Respirable fraction.

Spain

Components	Type	Value	Form
Ammonium sulphate (CAS 7783-20-2)	TWA (VLA-ED)	3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.

Spain. Occupational Exposure Limits

Components	Type	Value	Form
Mica (CAS 12001-26-2)	TWA	3 mg/m3	Respirable fraction.

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value	Form
Mica (CAS 12001-26-2)	TWA	3 mg/m3	Respirable dust.

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
Mica (CAS 12001-26-2)	TWA	10 mg/m3	Inhalable
		0,8 mg/m3	Respirable.

United Kingdom

Components	Type	Value	Form
Ammonium sulphate (CAS 7783-20-2)	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Inspirable dust.

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs)

Components	Type	Route	Value	Form
Ammonium dihydrogenorthophosphate (CAS 7722-76-1)	Aqua (freshwater)	Not applicable	1,7 mg/l	
	Aqua (intermittent releases)	Not applicable	17 mg/l	
	Aqua (marine water)	Not applicable	0,17 mg/l	
	Sewage Treatment Plant	Not applicable	10 mg/l	

8.2. Exposure controls

Appropriate engineering controls Provide sufficient ventilation for operations causing dust formation. Observe occupational exposure limits and minimise the risk of exposure.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Wear approved safety goggles.

Skin protection

- Hand protection It is a good industrial hygiene practice to minimise skin contact. For prolonged or repeated skin contact use suitable protective gloves.

- Other Wear suitable protective clothing. It is a good industrial hygiene practice to minimise skin contact.

Respiratory protection In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter (type P2). If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures Handle in accordance with good industrial hygiene and safety practices. Routinely wash work clothing and protective equipment to remove contaminants. Observe any medical surveillance requirements.

Environmental exposure controls Contain spills and prevent releases and observe national regulations on emissions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Solid.

Form Fine powder.

Colour Various.

Odour Odourless.

Odour threshold Not available.

pH 4,5 of 5% solution in water

Melting point/freezing point Not available.

Initial boiling point and boiling range Not applicable.

Flash point Not available.

Evaporation rate Not applicable.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not applicable.

Flammability limit - upper (%) Not applicable.

Vapour pressure Not applicable.

Vapour density Not applicable.

Relative density Not applicable.

Solubility(ies) Soluble in water, but silicon additive delays dissolution.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature	190 °C (374 °F)
Viscosity	Not applicable.
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

9.2. Other information

Density	1000,00 - 1300,00 kg/m³

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Stable under normal temperature conditions.
10.3. Possibility of hazardous reactions	Hazardous polymerisation does not occur.
10.4. Conditions to avoid	Temperatures above melting point. Contact with alkalis.
10.5. Incompatible materials	Strong acids. Strong bases. Strong oxidising agents. Alkali metals. Magnesium. Water.
10.6. Hazardous decomposition products	Ammonia. Sulphur oxides. Oxides of phosphorus. Carbon oxides.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Ingestion	Under normal conditions of intended use, this material does not pose a risk to health. However, accidental ingestion of the content may cause discomfort.
Inhalation	Dust may irritate respiratory system.
Skin contact	Dust or powder may irritate the skin.
Eye contact	Dust may irritate the eyes.
Symptoms	Irritation of eyes and mucous membranes. Exposed individuals may experience eye tearing, redness, and discomfort.

11.1. Information on toxicological effects

Acute toxicity	May cause eye, skin and respiratory tract irritation.
Skin corrosion/irritation	Dust may irritate skin.
Serious eye damage/eye irritation	Dust in the eyes will cause irritation.
Respiratory sensitisation	No data available.
Skin sensitisation	Dust may irritate skin.
Germ cell mutagenicity	No data available.
Carcinogenicity	Not available.
Reproductive toxicity	No data available.
Specific target organ toxicity - single exposure	None known.
Specific target organ toxicity - repeated exposure	None known.
Aspiration hazard	Not applicable.
Mixture versus substance information	None known.
Other information	Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure.

SECTION 12: Ecological information

12.1. Toxicity	The product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.
12.2. Persistence and degradability	Not available.
12.3. Bioaccumulative potential	The product is not expected to bioaccumulate.
Partition coefficient n-octanol/water (log Kow)	Not available.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	Not available.

Mobility in general	The product is partly soluble in water. May spread in the aquatic environment.
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of waste and residues in accordance with local authority requirements.
Contaminated packaging	Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code	16 05 09 Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

ADN

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	This substance/mixture is not intended to be transported in bulk.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I

Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Ammonium dihydrogenorthophosphate (CAS 7722-76-1)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not listed.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding

Not listed.

Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances

Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Not listed.

Directive 94/33/EC on the protection of young people at work

Not listed.

Other regulations	The product does not need to be labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.
National regulations	Follow national regulation for work with chemical agents.
15.2. Chemical safety assessment	No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations	DNEL: Derived No-Effect Level. PNEC: Predicted No-Effect Concentration. PBT: Persistent, bioaccumulative and toxic. vPvB: Very Persistent and very Bioaccumulative. DSD: Directive 67/548/EEC. CLP: Regulation No. 1272/2008.
References	HSDB® - Hazardous Substances Data Bank Registry of Toxic Effects of Chemical Substances (RTECS)
Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Full text of any statements or R-phrases and H-statements under Sections 2 to 15	None.
Training information	Follow training instructions when handling this material.
Disclaimer	This information is based on our current knowledge and is believed to be correct as of the date issued. The information is intended to describe the product for the purposes of health, safety and environmental requirements only and no warranty, express or implied, is made. It should also not be construed as guaranteeing any specific property of the product. In addition, information obtained from a database is subject to change and may not be as current as the information in the SDS available directly from UTCFS.