SAFETY DATA SHEET

[According to Regulation (EC) No. 1907/2006 (REACH)]

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

1.1 Product identifier

Trade name: **P1DB, P2G, P1GM, P2GM, PD2G, PD1GA, PD2GA, PD4GA, PD6GA, PD9GA, PD12GA, PDE1, PDE6, PDE12, PDE1GA, F1G, F2G, F1GM, F2GM**

Other name: ABC Class Powder Fire Extinguisher

(This SDS covers the mixture Adex K and Nitrogen used as the propellant in pressurized container.)

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

Relevant identified uses: Fire extinguisher for use on class A, B and C fires

Uses advised against: Not determined

1.3 Details of the supplier of the safety data sheet

Manufacturer / supplier: UTC CCS Manufacturing Polska Sp. z o.o.

Address: Ul. Kolejowa 24, 39-100 Ropczyce, Poland

Telephone number: +48 17 221 02 02

Fax: +48 17 221 02 48

e-mail address of competent person responsible for the SDS: msds-rop@carrier.com

1.4 Emergency telephone number

European Union emergency phone number:

112 - in case of poisoning - ask for Poison Information (24 hours a day, 7 days a week).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP)

Press. Gas, H280

2.1.2 Additional information

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Hazard pictograms:



Signal word:
Warning

Hazard statements:
H280: Contents under pressure; may explode if heated.

Precautionary statements:
P403: Store in a well-ventilated place.

Further information:
Explosion risk in case of fire.

Supplemental Hazard information (EU):
Not applicable.

2.3 Other hazards
Product does not contain ingredients, which meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation.

SECTION 3: Composition / information on ingredients

3.1 Substances

Propellant (Nitrogen):

CAS No	EC No	REACH Registration No	Concentration [%] (w/w)	Name	Classification according to Regulation (EC) No 1272/2008 (CLP)
7727-37-9	231-783-9	Listed in Annex IV of Regulation (EC) No 1907/2006 (REACH) - exempted from registration	< 100	Nitrogen	Press. Gas (Liq.), H280

3.2 Mixtures
Mixture classified as not hazardous according to Regulation (EC) No 1272/2008 (CLP).

Further information:
Mixture contain substance with national limit values, for more information: see SECTION 8.

Brass components of the pressurized container contains Lead CAS No: 7439-92-1 in a concentration greater than 0.1% (w/w).

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes: ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
Following 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.
Following skin contact: take off contaminated clothes. Wash contaminated skin with water and soap and rinse thoroughly. Consult a doctor if disturbing symptom occur.
Following eye contact: dust in the eyes: do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.
Following ingestion: do not induce vomiting. Contact a doctor if disturbing symptom occur. Never give anything by mouth to an unconscious person.
Self-protection of the first aider: use personal protective equipment as required.

4.2 Most important symptoms and effects, both acute and delayed

Skin contact: possible dryness and redness in case of prolonged or repeated contact.
Eye contact: possible redness, tearing, temporary blurred vision.
Inhalation: exposure to high concentrations of dusts may cause respiratory irritation, in high concentrations of gas may cause asphyxiation.
Ingestion: possible abdominal pains, nausea, vomiting and diarrhea after ingestion of large amount of the product.

4.3 Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: this product is not flammable. Use extinguishing agent suitable for type of surrounding fire, product is used for fire extinguishing.
Unsuitable extinguishing media: none, product is used for fire extinguishing.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: there are no special hazards arising from the mixture during fire – product is used for fire extinguishing.

5.3 Advice for firefighters

Protection during firefighting: do not enter fire area without proper protective equipment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Limit the access for the outsiders into the breakdown area, until the suitable cleaning operations are completed. Ensure that effects of the breakdown are removed only by qualified personnel. In case of large spills, isolate the

exposed area. Avoid direct contact with skin and eyes. Ensure adequate ventilation. Wear personal protective equipment. Do not inhale dusts of the product.

6.2 Environmental precautions
Do not let the product to enter ground waters, drainage system, sewage and soil. Notify relevant emergency services.

6.3 Methods and material for containment and cleaning up
Collect spilled product mechanically, avoid dusting (e.g. using industrial vacuum cleaner with HEPA filter) and place it in properly labelled containers. Treat collected material as waste and pass it for disposal. Clean and ventilate contaminated place. Do not use water – it can cause corrosion.

6.4 Reference to other sections
Appropriate conduct with waste product – section 13. Personal protection equipment – section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handle in accordance with good occupational hygiene and safety practices. Do not eat, drink or smoke in the workplace. Before breaks and after work wash hands. Ensure adequate ventilation. Avoid eyes and skin contamination. Avoid dust formation. Do not inhale dusts of the product. Wear personal protective equipment.

7.2 Conditions for safe storage, including any incompatibilities
Storage temperature -30°C / +60°C. Protect from direct sunlight. Keep away from incompatible materials (see subsection 10.5).

7.3 Specific end use(s)
No information about uses other than mentioned in subsection 1.2.

SECTION 8: Exposure controls / personal protection

8.1 Control parameters
Substance: Mica (CAS number: 12001-26-2)

Country	Limit value - Eight hours		Limit value - Short term		Legal basis
	ppm	mg/m^3	ppm	mg/m^3	
Belgium	-	3 (respirable)	-	-	Federal Public Service Employment - List of limit values for exposure to chemical agents.
Bulgaria	-	6 (inhalable) 3 (respirable	-	-	Ordinance No. 13 of 30 December 2003 to protect workers from the risks related to exposure to chemical agents at work.
Croatia	-	10 (inhalable) 0,8 (respirable)	-	-	Occupational Exposure Limits. Pursuant to Article 12 Paragraph 1 of the Law on Protection at Work ("Official Gazette", Nos. 59/96, 94/96, 114/03, 100/04, 86/08 and 116/08), the Minister of Economy, Labour and Entrepreneurship. Exposure limits set forth Hazardous Substances At Work And A Biological Limit Values.
Great Britain	-	10 (inhalable) 0,8 (respirable)	-	-	Health and Safety Executive - EH40 (Second edition, published 2011) Workplace exposure limits.
Ireland	-	10 (inhalable) 0,8 (respirable)	-	-	Ireland's National Authority for Occupational Safety and Health in Schedule 1 to the 2002 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2001.

Country	Limit value - Eight hours		Limit value - Short term		Legal basis
	ppm	mg/m³	ppm	mg/m³	
Italy	-	3 (respirable)	-	-	Limit values Italy: Legislative Decree of the Government 277, the Legislative Decree 66 of 15/08/1991, 25/02/2000, 26/02/2004 Ministerial Decree.
Spain	-	3 (respirable)	-	-	Ministry of Employment and Social Security Occupational exposure limits for chemical agents in Spain (2016).
Switzerland	-	3 (respirable)	-	-	SUVA - limits at the workplace 2016.

For more information, please check any national occupational exposure limit values in your country.

Biological limit values: no biological exposure limits noted for the ingredient(s).
Recommended monitoring procedures: follow standard monitoring procedures.

8.2 Exposure controls

8.2.1 Appropriate engineering controls
Ensure adequate ventilation, especially in confined areas.
Observe good occupational hygiene and safety practices. Do not eat, drink or smoke when using the product. Wash hands thoroughly before breaks and after work. Avoid eyes and skin contamination. Ensure adequate general and/or local ventilation in the workplace.

8.2.2 Personal protection equipment
Personal protective equipment must meet requirements of directive 89/686/CE. Employer is obliged to ensure equipment adequate to activities carried out, with quality demands, cleaning and maintenance.
Hand and body protection: under normal conditions of work is not required.
Eye and face protection: wear safety glasses with side shields (or goggles), if risk assessment indicates that it is necessary.
Respiratory protection: in case of insufficient ventilation, wear suitable respiratory equipment.

8.2.3 Environmental exposure controls
Avoid release to the environment, do not enter the sewage system. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Basic physical and chemical properties of:

	Mixture (Adex K)	Propellant (Nitrogen)
a) physical state/form:	powder	gas
b) colour:	various	colourless
c) odour:	odourless	no odour
d) odour threshold:	not determined	not determined
e) pH:	5,1 (5% water solution)	not determined
f) melting point/freezing point:	not determined	-210°C
g) initial boiling point and boiling range:	not determined	-196°C
h) flash point:	not applicable	not applicable

i)	**evaporation rate:**	not determined	not applicable
j)	**flammability (solid, gas):**	product is not flammable	not flammable
k)	**upper/lower flammability or explosive limits:**	not applicable	not applicable
l)	**vapour pressure:**	not applicable	not applicable
m)	**vapour density:**	not applicable	not applicable
n)	**density:**	0,80 - 0,94 g/cm^3	not applicable
o)	**solubility(ies):**	insoluble in water	20 mg/l (water)
p)	**partition coefficient n-octanol/water:**	not determined	not applicable
q)	**auto-ignition temperature:**	not applicable	not applicable
r)	**decomposition temperature:**	190°C	not applicable
s)	**explosive properties:**	not display	not applicable
t)	**oxidising properties:**	not display	not applicable
u)	**viscosity:**	not applicable	not applicable

9.2 Other information
No additional test results.
Product contains gas under pressure.

SECTION 10: Stability and reactivity

10.1 Reactivity
Product is feebly reactive. It does not undergo hazardous polymerization. See also subsections 10.3 and 10.5.

10.2 Chemical stability
The product is stable under normal conditions of handling and storage.

10.3 Possibility of hazardous reactions
Hazardous reactions are not known.

10.4 Conditions to avoid
Avoid elevated temperatures, sources of fire and heat.

10.5 Incompatible materials
Strong oxidizers, strong bases, strong acids, alkali metals, magnesium.

10.6 Hazardous decomposition products
There are no known hazardous decomposition products.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity: based on available data, the classification criteria are not met.
Skin corrosion/irritation: based on available data, the classification criteria are not met.
Serious eye damage/irritation: based on available data, the classification criteria are not met.
Respiratory or skin sensitization: based on available data, the classification criteria are not met.
Germ cell mutagenicity: based on available data, the classification criteria are not met. Analysis of product composition does not indicate presence of components which can cause mutagenic effect.
Carcinogenicity: based on available data, the classification criteria are not met. Product does not contain

components which are carcinogenic.
Reproductive toxicity: based on available data, the classification criteria are not met.
STOT-single exposure: based on available data, the classification criteria are not met.
STOT-repeated exposure: based on available data, the classification criteria are not met.
Aspiration hazard: based on available data, the classification criteria are not met.

Other information: mixture may cause mechanical eye, skin and respiratory tract irritation. The mixture does not meet the classification criteria: aspiration hazard, irritation to skin and eyes, according to CLP Regulation.

SECTION 12: Ecological information

12.1 Toxicity
Product is not classified as hazardous for the environment.

12.2 Persistence and degradability
Product is mostly a mixture of inorganic substances which do not undergo biodegradation.

12.3 Bio accumulative potential
No data.

12.4 Mobility in soil
Mobility of components of the mixture depends on the hydrophilic and hydrophobic properties and biotic and abiotic conditions of soil, including its structure, climatic conditions, seasons and soil organisms.

12.5 Results of PBT and vPvB assessment
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects
Product is not classified as hazardous to the ozone layer. Consider other harmful effects of individual components of the mixture on the environment (e.g. endocrine disrupting potential, global warming potential).

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Disposal methods for the mixture: do not deposit with household waste. Waste should not be disposed of by release to sewers. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
Disposal methods for used packing: package should be passed to a certified company. Do not mix with other wastes. Waste code should be assigned in place of formation. Waste code should be assigned in place of formation.

Legal basis: Directive 2008/98/EC, 94/62/EC.

SECTION 14: Transport information

14.1 UN Number
UN 1044

14.2 UN proper shipping name

Fire extinguisher

14.3 Transport hazard class(es)
2.2

14.4 Packing group
Not applicable.

14.5 Environmental hazards
Not applicable.

14.6 Special precautions for user
Land carriage:
- according to special regulation 594 free from GGVSE/ADR-regulations.
Sea carriage:
- IMDG/GGV sea: Class 2.2
- EMS: F-C,S-V
- PG: none,
- marine pollutant: no marking / label,
- danger marking No. 2.2

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Commission **Regulation (EU) 2015/830** of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC as amended.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance) as amended.
Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives. European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste

15.2 Chemical safety assessment
It is not necessary to carry out a chemical safety assessment for the mixture.

SECTION 16: Other information

Relevant H- and EUH-phrases (number and full text):
H280 Contents gas under pressure; may explode if heated.

Abbreviations and acronyms:
PBT Persistent, Bioaccumulative and Toxic substance
vPvB very Persistent, very Bioaccumulative substance

Trainings:
Before commencing working with the product, the user should learn the Health & Safety regulations, regarding handling chemicals, and in particular, undergo a proper workplace training.

Key literature references and sources of data:
This SDS was prepared on the basis of sheets of the ABC Fire extinguishing powder, literature data, online databases as well as our knowledge and experience, taking into account current legislation.

Additional information:
Classification was based on data on hazardous substances calculation method under the guidance of Regulation 1272/2008/EC (CLP).
The information above is based on a current available data concerning the product, but also on the experience and knowledge in this field of the producer. They are neither a quality description of the product nor a guarantee of particular features. They are to be treated as aid to safety in transport, storage and usage of the product. That does not free the user from the responsibility of improper usage of the information above and also of improper compliance with the law norms in the field.