Material Safety Data Sheet

MSDS No: PER251
Issue No:1

IMPORTANT
Read this MSDS before handling and disposing of this product and pass this information on to employees, customers and users of this product.

1. IDENTIFICATION

Product Name	ImpressPLUS Alginate
Company Name	Perfection Plus Ltd
Company Address	6 Westwood Court, Brunel Road, Totton, Hants. SO40 3WX. UK
Company Phone No.	+44 (0) 2380 866 677

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture	
The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.	
Hazard classification and indication	Specific target organ toxicity - repeated exposure, category 2 H373 May cause damage to organs through prolonged or repeated exposure.

2.2 Label Elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements	
Signal Word	Warning
Hazard Statement	H373 May cause damage to lungs through prolonged or repeated exposure via inhalation.
Hazard Statement: Precaution	P260 Do not breathe dust. P270 Do not eat, drink or smoke when using this product. P314 Get medical advice / attention if you feel unwell.
Contains	Kieselguhr, soda ash flux-calcined

2.3 Other Hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

3. COMPOSITION/DATA ON COMPONENTS

3.1 Substances

Information not relevant.

3.2 Mixtures

Components Name	Index No	CAS No	EC No	Registration No	Conc (% w/w)	Classification 1272/2008 (CLP)
Kieselguhr, soda ash flux-calcined		68855-54-9	272-489-0	01-2119488518-22	65 – 80%	STOT RE 2 H373
dipotassium hexafluorotitanate		16919-27-0	240-969-9	01-2119978268-20	1 - 3%	Acute Tox. 3 H331, Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335

4. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.
Skin Contact	Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.
Eye Contact	Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.
Ingestion	Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.
Protective measures for the first rescue workers	For PPE (personal protection equipment) required for first aid refer to section 8.2 of this safety data sheet.

4.2 Most important symptoms and effects, both acute and delayed

For symptoms and effects caused by the contained substances, see chap. 11.

4.3 Indication of any immediate medical attention and special treatment needed

Information not available.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media
SUITABLE EXTINGUISHING EQUIPMENT: The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray. UNSUITABLE EXTINGUISHING EQUIPMENT: None in particular.
5.2 Special hazards arising from the substance or mixture
HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE: Do not breathe combustion products. The product is combustible and, when the powder is released into the air in sufficient concentrations and in the presence of a source of ignition, it can create explosive mixtures with air. Fires may start or get worse by leakage of the solid product from the container, when it reaches high temperatures or through contact with sources of ignition.
5.3 Advice for firefighters
GENERAL INFORMATION Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations. SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
If there are no contraindications, spray powder with water to prevent the formation of dust. Avoid breathing vapours/mists/gases. Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.
6.2 Environmental precautions
The product must not penetrate into the sewer system or come into contact with surface water or ground water.
6.3 Methods and materials for containment and cleaning up.
Use spark-proof mechanical equipment to collect the leaked product and place it in containers for recovery or disposal. If there are no contraindications, use jets of water to eliminate product residues. Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4 Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2 Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany): 11

7.2 Specific end use(s)

Information not available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

BEL	Belgique	AR du 11/3/2002. La liste est mise à jour pour 2010
CZE	Česká Republika	Nařízení vlády č. 361/2007 Sb. kterým se stanoví podmínky ochrany zdraví při práci
DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
EST	Eesti	Töökeskkonna keemiliste ohutegurite piirnormid 1. Vastu võetud 18.09.2001 nr 293 RT I 2001, 77, 460 - Redaktsiooni jõustumise kp: 01.01.2008
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GRB	United Kingdom	EH40/2005 Workplace exposure limits
IRL	Éire	Code of Practice Chemical Agent Regulations 2011
LTU	Lietuva	DĖL LIETUVOS HIGIENOS NORMOS HN 23:2007 CHEMINIŲ MEDŽIAGŲ 2007 m. spalio 15 d. Nr. V-827/A1-287
LVA	Latvija	Ķīmisko vielu aroda ekspozīcijas robežvērtības (AER) darba vides gaisā 2012
NLD	Nederland	Databank of the social and Economic Concil of Netherlands (SER) Values, AF 2011:18
NOR	Norge	Veiledning om Administrative normer for forurensning i arbeidsatmosfære
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
SWE	Sverige	Occupational Exposure Limit Values, AF 2011:18
	TLV-ACGIH	ACGIH 2014

Kieselguhr, soda ash flux-calcined								
Health - Derived no-effect level - DNEL / DMEL								
	Effects on consumers				**Effects on workers**			
Route of exposure	**Acute local**	**Acute systemic**	**Chronic local**	**Chronic systemic**	**Acute local**	**Acute systemic**	**Chronic local**	**Chronic systemic**
Oral			VND	18,7 mg/kg/d				
Inhalation			VND	0,05 mg/m3			VND	0,05 mg/m3

CRISTOBALITE								
Threshold Limit Value								
Type	Country	TWA/8h		STEL/15min				
		mg/m3	ppm	mg/m3	ppm			
VLEP	BEL	0,05						
TLV	CZE	0,1						
MAK	DEU	0,15						
VLA	ESP	0,05						
TLV	EST	0,05						
VLEP	FRA	0,05				RESP.		
WEL	GRB	0,3						
OEL	IRL	0,1						
RD	LTU	0,05						
RV	LVA	0,05						
OEL	NLD	0,075				RESP.		
TLV	NOR	0,05				RESP.		
NDS	POL	2				INHAL.		
NDS	POL	0,3				RESP.		
MAK	SWE	0,05				RESP.		
TLV-ACGIH		0,025						

Legend:

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

During the risk assessment process, it is essential to take into consideration the ACGIH occupational exposure levels for inert particulate otherwise classified (PNOC respirable fraction: 3 mg/m3; PNOC inhalable fraction: 10 mg/m3). For values above these limits, use a P type filter, whose class (1, 2 or 3) must be chosen according to the outcome of risk assessment. Si raccomanda di considerare nel processo di valutazione del rischio i valori limite di esposizione professionale previsti dall' ACGIH per le polveri inerti non altrimenti classificate (PNOC frazione respirabile: 3 mg/mc; PNOC frazione inalabile: 10 mg/mc). In caso di superamento di tali limiti si consiglia l'utilizzo di un filtro di tipo P la cui classe (1, 2 o 3) dovrà essere scelta in base all'esito della valutazione del rischio.

8.2 Control parameters

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

HAND PROTECTION
In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (see standard EN 374).
Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION
Use a type P filtering facemask (see standard EN 149) or equivalent device, whose class (1, 2 or 3) and effective need, must be defined according to the outcome of risk assessment.

ENVIRONMENTAL EXPOSURE CONTROLS.

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	Powder
Colour	Coloured
Odour	Characteristic
Odour Threshold	No data available
pH	8 at 20°C (suspension of 10 g of powder per liter of water after 2 min)
Melting Point	No data available
Initial boiling Point	Not applicable.
Flash Point (°C)	No data available
Flammability (solid, gas)	No data available
Self-igniting	Product is not self-igniting
Danger of explosion	Product does not present an explosion hazard

Explosion limits: Lower Upper	 No data available No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	1,800 Kg/l
Solubility	In water: it reacts to form a hydrophilic gel.
Partition coefficient	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidising properties	No data available

9.2 Other information

Information not available.

10. STABILITY AND REACTIVITY

10.1 Reactivity
There are no particular risks of reaction with other substances in normal conditions of use.
DIPOTASSIUM HEXAFLUOROTITANATE
With mineral acids it generates HF.
10.2 Chemical stability
The product is stable in normal conditions of use and storage.
10.3 Possibility of hazardous reactions
No hazardous reactions are foreseeable in normal conditions of use and storage.
10.4 Conditions to avoid
None in particular. However the usual precautions used for chemical products should be respected.
10.5 Incompatible materials
DIPOTASSIUM HEXAFLUOROTITANATE
Strong acids.
10.6 Hazardous decomposition products
Information not available.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.
This product may cause functional disorders or morphological mutations after repeated or

prolonged exposure and/or may accumulate inside the human body and is thus graded as dangerous.

Data available for the mixture:

ACUTE TOXICITY: no data available.
SKIN CORROSION/IRRITATION: no data available.
SERIOUS EYE DAMAGE/IRRITATION: no data available.
RESPIRATORY OR SKIN SENSITISATION: no data available.
GERM CELL MUTAGENICITY: no data available.
CARCINOGENICITY: no data available.
REPRODUCTIVE TOXICITY: no data available.
STOT-SINGLE EXPOSURE: no data available.
STOT-REPEATED EXPOSURE: may cause damage to lungs through prolonged or repeated exposure through inhalation, see the composition indicated in Section 3.2.
ASPIRATION HAZARD: no data available.

Data available for the substances in the mixture:

KIESELGUHR, SODA ASH FLUX-CALCINED
STOT-REPEATED EXPOSURE: the substance is classified in this hazard class because it contains respirable crystalline silica (cristobalite, CAS 14464-46-1), classified as STOT RE 1, as impurity contained in quantity from 1 to 10 %.

DIPOTASSIUM HEXAFLUOROTITANATE
ACUTE TOXICITY
LD50 (Oral).324 mg/kg Rat (Data available in the supplier safety data sheet).
ACUTE TOXICITY INHALATION: toxic if inhaled, classification available in the supplier SDS.
SKIN CORROSION/IRRITATION: causes skin irritation, classification available in the supplier SDS.
SERIOUS EYE DAMAGE/IRRITATION: causes serious eye irritation, classification available in the supplier SDS.
STOT-SINGLE EXPOSURE: may cause respiratory irritation, classification available in the supplier SDS.

12. ECOLOGICAL INFORMATION

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

DIPOTASSIUM HEXAFLUOROTITANATE	
LC50 - for Fish.	172,4 mg/l/96h Danio rerio, OECD TG 203.
EC50 - for Crustacea.	48,2 mg/l/48h Daphnia magna, OECD TG 202.
EC50 - for Algae / Aquatic Plants.	10,82 mg/l/72h Pseudokirchnerella subcapitata, OECD TG 201.

KIESELGUHR, SODA ASH FLUX-CALCINED	
LC50 - for Fish.	exceeds the maximum level of solubility of the substance, Oncorhynchus mykiss, OECD 203

EC50 - for Crustacea.	exceeds the maximum level of solubility of the substance, Daphnia magna, OECD 202
EC50 - for Algae / Aquatic Plants.	exceeds the maximum level of solubility of the substance, Desmodesmus subspicatus, OECD 201

12.2. Persistence and degradability.

DIPOTASSIUM HEXAFLUOROTITANATE	
Biodegradability	Information not available.

KIESELGUHR, SODA ASH FLUX-CALCINED	
Biodegradability	Information not available.

12.3. Bioaccumulative potential.

KIESELGUHR, SODA ASH FLUX-CALCINED
The product does not contain any substances expected to be bioaccumulating (data available in the SDS of the supplier).

DIPOTASSIUM HEXAFLUOROTITANATE
The product has a potential to bioaccumulate in aquatic organisms (data available in the SDS of the supplier).

12.4. Mobility in soil.

KIESELGUHR, SODA ASH FLUX-CALCINED
Not relevant due to the physical state of the product. The product is insoluble in water.

12.5. Results of PBT and vPvB assessment.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects.

Information not available.

13. DISPOSAL CONSIDERATIONS

Reuse, when possible. Neat product residues should be considered special non-hazardous waste. Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations. CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

14. TRANSPORTATION INFORMATION

14.1. UN number	Not applicable.
14.2. UN proper shipping name	Not applicable.
14.3. Transport hazard class(es)	Not applicable.
14.4. Packing group	Not applicable.
14.5. Environmental hazards	Not applicable.
14.6. Special precautions for user	Not applicable.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Information not relevant.

15. REGULATORY INFORMATION

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

Seveso category.
None.

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.
None.

Substances in Candidate List (Art. 59 REACH).
None.

Substances subject to authorisarion (Annex XIV REACH).
None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:
None.

Substances subject to the Rotterdam Convention:
None.

Substances subject to the Stockholm Convention:
None.

Healthcare controls. Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected. **German regulation on the classification of substances hazardous to water (VwVwS 2005).** WGK 1: Low hazard to waters

15.2. Chemical safety assessment

No chemical safety assessment has been processed for the mixture and the substances it contains.

16. OTHER INFORMATION

Text of hazard (H) indications mentioned in section 2-3 of the sheet:	Acute Tox. - 3 Acute toxicity, category 3 Acute Tox. - 4 Acute toxicity, category 4 STOT RE 2 - Specific target organ toxicity - repeated exposure, category 2 Eye Irrit. 2 - Eye irritation, category 2 Skin Irrit. 2 - Skin irritation, category 2 STOT SE 3 - Specific target organ toxicity - single exposure, category 3 H331 - Toxic if inhaled. H302 - Harmful if swallowed. H373 - May cause damage to organs through prolonged or repeated exposure. H319 - Causes serious eye irritation. H315 - Causes skin irritation. H335 - May cause respiratory irritation.
Legend	- ADR: European Agreement concerning the carriage of Dangerous goods by Road - CAS NUMBER: Chemical Abstract Service Number - CE50: Effective concentration (required to induce a 50% effect) - CE NUMBER: Identifier in ESIS (European archive of existing substances) - CLP: EC Regulation 1272/2008 - DNEL: Derived No Effect Level - EmS: Emergency Schedule - GHS: Globally Harmonized System of classification and labeling of chemicals - IATA DGR: International Air Transport Association Dangerous Goods Regulation - IC50: Immobilization Concentration 50% - IMDG: International Maritime Code for dangerous goods - IMO: International Maritime Organization - INDEX NUMBER: Identifier in Annex VI of CLP - LC50: Lethal Concentration 50% - LD50: Lethal dose 50% - OEL: Occupational Exposure Level

	- PBT: Persistent bioaccumulative and toxic as REACH Regulation - PEC: Predicted environmental Concentration - PEL: Predicted exposure level - PNEC: Predicted no effect concentration - REACH: EC Regulation 1907/2006 - RID: Regulation concerning the international transport of dangerous goods by train - TLV: Threshold Limit Value - TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure. - TWA STEL: Short-term exposure limit - TWA: Time-weighted average exposure limit - VOC: Volatile organic Compounds - vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation - WGK: Water hazard classes (German).
General Bibliography	1. Regulation (EU) 1907/2006 (REACH) of the European Parliament 2. Regulation (EU) 1272/2008 (CLP) of the European Parliament 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament 4. Regulation (EU) 2015/830 of the European Parliament 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament - The Merck Index. - 10th Edition - Handling Chemical Safety - INRS - Fiche Toxicologique (toxicological sheet) - Patty - Industrial Hygiene and Toxicology - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition - ECHA website

DATE: 26/06/2018 **ISSUE No: 1** **SUPERSEDES ISSUE: N/A**

DISCLAIMER OF LIABILITY

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness.

The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge.

For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

Emergency Phone No: 023 8086 6677