1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : HE4873

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

Use of the Substance/Mixture : raw material for plastics industry

1.3 Details of the supplier of the safety data sheet

Supplier : Borealis AG
Wagramer Strasse 17-19, 1220 Vienna, Austria
Telephone: +43 1 22400 0

E-mail address : sds@borealisgroup.com

1.4 Emergency telephone number

0870 600 6266 National Poisons Information Service, UK (24h)

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Classification (67/548/EEC, 1999/45/EC)

The product is not classified as dangerous according to Directive 1999/45/EC.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Additional Labelling:

Safety data sheet available on request.
Contains: C,C′-azodi(formamide)May produce an allergic reaction.
The following percentage of the mixture consists of ingredient(s) with unknown acute oral toxicity: 72,75 %
The following percentage of the mixture consists of ingredient(s) with unknown acute dermal toxicity: 72,75 %
The following percentage of the mixture consists of ingredient(s) with unknown acute inhalation toxicity: 72,75 %

2.3 Other hazards

The product burns, but is not classified as flammable.
Ammonia gas may be liberated at high temperatures.

3. Composition/information on ingredients

3.2 Mixtures

Chemical nature : The product is a polyethylene polymer.
It contains stabilisers.

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
C,C′-azodi(formamide)	123-77-3 204-650-8	E; R 2 R42	Resp. Sens. 1; H334	< 1

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.

4. First aid measures

4.1 Description of first aid measures

If inhaled : Move to fresh air in case of accidental inhalation of vapours or decomposition products.

In case of skin contact : Cool melted product on skin with plenty of water. Do not remove solidified product.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Inhalation of dust may irritate the respiratory tract.
Prolonged inhalation of high doses of decomposition products may give headache or irritation of the respiratory tract.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.
No specific instructions needed.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water in spread jet, dry chemicals, foam or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Principal toxicant in the smoke is carbon monoxide.

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Wear self-contained breathing apparatus and protective suit.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Ensure adequate ventilation. Use personal protective equipment.

6.2 Environmental precautions

Environmental precautions	:	No specific measures identified. The product is not considered hazardous for the environment.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	:	Vacuum or sweep up spill. All spill of material must be removed immediately to prevent slipping accidents.

6.4 Reference to other sections

For personal protection see section 8.
For disposal considerations see section 13.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	During processing and thermal treatment of the product, small amounts of volatile hydrocarbons may be released. Avoid inhalation of dust and decomposition fumes. Provide adequate ventilation. Local exhaust ventilation may be necessary.
	:	The product contains small amounts of a substance classified as sensitising, which may produce an allergic reaction to susceptible personnel. Personnel sensitised to this substance should not be allowed to handle the product.
Advice on protection against fire and explosion	:	Dust from the product gives a potential risk for dust explosion. All equipment shall be grounded.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Safety aspects do not require any special precautions in terms of storage.
Storage temperature	:	< 50 °C

7.3 Specific end use(s)

Specific use(s)	:	Raw material for wire and cable applications.

8. Exposure controls/personal protection

8.1 Control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
C,C'-azodi(formamide)	123-77-3	TWA	1 mg/m3	2007-08-01	GB EH40
Further information	:	53+54: Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. 54 Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified asthmagens or respiratory sensitisers. Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance. Capable of causing occupational asthma. The identified substances are those which: - are assigned the risk phrase 'R42: May cause sensitisation by inhalation'; or 'R42/43: May cause sensitisation by inhalation and skin contact' or - are listed in section C of HSE publication 'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma' as updated from time to time, or any other substance which the risk assessment has shown to be a potential cause of occupational asthma. The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma.			
		STEL	3 mg/m3	2007-08-01	GB EH40
Further information	:	53+54: Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. 54 Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified asthmagens or respiratory sensitisers. Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance. Capable of causing occupational asthma. The identified substances are those which: - are			

		assigned the risk phrase 'R42: May cause sensitisation by inhalation'; or 'R42/43: May cause sensitisation by inhalation and skin contact' or - are listed in section C of HSE publication 'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma' as updated from time to time, or any other substance which the risk assessment has shown to be a potential cause of occupational asthma. The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma.

However, as the chemical is embedded in a solid polymer, exposure is unlikely, unless the polymer is processed in a way that makes such exposure possible.

DNEL	:	Not applicable
PNEC	:	Not applicable

8.2 Exposure controls

Engineering measures

Provide adequate ventilation.
Local exhaust ventilation may be necessary.

Personal protective equipment

Respiratory protection	:	In case of strong dust development use dust masks. P2 filter

Environmental exposure controls

General advice	:	No specific measures identified. The product is not considered hazardous for the environment.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	pellets
Colour	:	light yellow
Odour	:	odourless
pH	:	Not applicable, insoluble
Melting range	:	100 - 140 °C
Boiling range	:	Decomposes on heating.
Flash point	:	Not applicable, (solid)
Evaporation rate	:	Not applicable, (solid)
Flammability (solid, gas)	:	The product is not flammable.
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Vapour pressure	:	Not applicable, (solid)

Density	:	0,9 - 1,0 g/cm³
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	Not applicable, insoluble
Ignition temperature	:	> 320 °C
Viscosity, kinematic	:	no data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

Bulk density	:	500 - 600 kg/m³

10. Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

The product is a stable thermoplastic.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	None known.

10.4 Conditions to avoid

Conditions to avoid	:	Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Materials to avoid	:	None known.

10.6 Hazardous decomposition products

Hazardous decomposition products	:	Under fire conditions: Carbon monoxide
	:	During processing and thermal treatment of the product, small amounts of volatile hydrocarbons may be released. Ammonia gas may be liberated at high temperatures.

11. Toxicological information

11.1 Information on toxicological effects

Product

Acute oral toxicity	:	No known effect.
Acute inhalation toxicity	:	No known effect.
Acute dermal toxicity	:	No known effect.

Skin corrosion/irritation	:	No known effect.
Serious eye damage/eye irritation	:	No known effect.
Respiratory or skin sensitisation	:	May cause sensitization of susceptible persons by inhalation of dust.
STOT - repeated exposure	:	Health injuries are not known or expected under normal use.
Further information	:	The product is not classified as hazardous according to Regulation (EC) No 1272/2008. Inhalation of dust may irritate the respiratory tract. Prolonged inhalation of high doses of decomposition products may give headache or irritation of the respiratory tract.
	:	Ammonia gas may be liberated at high temperatures. Exposure to ammonia may cause irritation and burns to skin, eyes and respiratory tract.

12. Ecological information

12.1 Toxicity

Product

Toxicity to fish	:	No known effect.
Toxicity to daphnia and other aquatic invertebrates	:	No known effect.
Toxicity to algae	:	No known effect.
Toxicity to bacteria	:	No known effect.

Further information

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 72,75 %

12.2 Persistence and degradability

Product

Biodegradability	:	Not readily biodegradable.

12.3 Bioaccumulative potential

Product

Bioaccumulation	:	Does not accumulate in organisms.

12.4 Mobility in soil

Product

Mobility	:	The product is insoluble and floats on water., Not expected to adsorb on soil.

12.5 Results of PBT and vPvB assessment

Product

Assessment	:	This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT)., This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

Product

Additional ecological information	:	The product is not considered hazardous for the environment.

13. Disposal considerations

13.1 Waste treatment methods

Product	:	Reuse or recycle if not contaminated. The product may be safely used as fuel. Proper combustion does not require any special flue gas control. Check with local regulations.

14. Transport information

14.1 UN number

ADR
Not dangerous goods

14.2 Proper shipping name

ADR
Not dangerous goods

14.3 Transport hazard class

ADR
Not dangerous goods

14.4 Packing group

ADR
Not dangerous goods

14.5 Environmental hazards

ADR
Not dangerous goods

14.6 Special precautions for user

Not dangerous goods in the meaning of ADR/RID, ADNR, IMDG-Code, ICAO/IATA-DGR

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks : Not applicable

15. Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : C,C′-azodi(formamide)

15.2 Chemical Safety Assessment

no

16. Other information

Full text of R-phrases referred to under sections 2 and 3

R 2	Risk of explosion by shock, friction, fire or other sources of ignition.
R42	May cause sensitisation by inhalation.

Full text of H-Statements referred to under sections 2 and 3.

H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Further information

Other information : Issued according to Regulation (EC) No 1907/2006, Annex II, and its amendments.
Changes since the last version are highlighted in the margin.
This version replaces all previous versions.

Issuer : Borealis, Group Product Stewardship / Niina Kerttula

Sources of key data used to compile the Safety Data Sheet : The classification information of components is based on raw material supplier data.

Disclaimer

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