Gryfilen® H12-NAS

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Chemical name	1-Propene, homopolymer
Trade name	Gryfilen
Product code	H12-NAS
CAS Number	9003-07-0
EC Number	618-352-4
Other means of identification	Polypropylene, Polypropylene homopolymer, PP
Product form	Pellets. This product consists of synthetic polymer microparticles.

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

Identified uses	Industrial use: manufacture of plastic articles by injection molding, thermoforming, extrusion, blow molding or other conversion processes.
Uses advised against	Other than those listed above.

1.3. Details of the supplier of the safety data sheet

Supplier	Grupa Azoty POLYOLEFINS S.A. ul. Kuźnicka 1 72-010 Police, POLAND commercial@grupaazoty.com

1.4. Emergency telephone number

Emergency service	Company's Dispatcher: +48 726 120 316 Grupa Azoty Zakłady Chemiczne "Police" S.A. Fire Brigade: +48 91 317 1998 General emergency telephone number: 112

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture	Not classified as a hazardous substance or mixture according to the Regulation (EC) No 1272/2008 of the European Parliament and of the Council.
2.2. Label elements	Not a hazardous substance or mixture according to the Regulation (EC) No 1272/2008 of the European Parliament and of the Council.

2.3. Other hazards

Hazards for human health	This product is in a pellet form. Under conditions of proper use, neither acute nor chronic adverse effects on human health can be expected. Dust may be formed, without exclusion of other ways, during the transport, processing and/or handling. Dust inhalation may irritate respiratory organs. Melted product may cause serious burns following the contact with the skin or eyes. Vapours formed by processing at higher temperatures may irritate respiratory system and eyes.
Environmental hazards	No harmful effects in the environment. It is a foreign substance in the environment with very slow degradation. The degradation is mainly caused by UV irradiation. The substance is insoluble in water.
Other information	Flammable, but not readily to ignite. Dangerous and irritating substances may be released by combustion. The dust is explosive; airborne dust concentration above the low explosive limit may cause the risk of explosion. The product can become electrostatically charged.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances	Not applicable.
3.2. Mixtures	This product is a homopolymer polypropylene. This product consists of synthetic polymer microparticles.

Ingredient	CAS number	% w/w
1-Propene, homopolymer	9003-07-0	>99
Other substances	-	<1

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

General advice	No special precaution measures are needed. In case of health problems or uncertainty seek medical attention and provide information from this material safety data sheet.
In case of inhalation	In case of dust or irritating vapours inhalation move the affected person to fresh air. Seek medical advice if the symptoms persist.

In case of eye contact	If dust irritates eyes, rinse eyes with water or remove the dust as other common physical contamination. Seek medical advice if the symptoms persist.
In case of skin contact	First aid is generally not needed. General hygiene measures should be followed. Wash skin with soap and water thoroughly if any discomfort irritation occurs. In case of contact with melted polymer, do not remove the product from the skin. Cool affected area with running cool water and provide medical attention.
In case of ingestion	In case of ingestion of bigger amount seek specialized medical attention.
4.2. Most important symptoms and effects, both acute and delayed	Inhalation of dust may irritate the respiratory organs. Prolonged inhalation of high doses of decomposition vapours may cause headache or irritation of the respiratory organs. Melted polymer causes redness and burns.
4.3. Indication of any immediate medical attention and special treatment needed	Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media	Fire – smaller extend: dry extinguishing material, CO_2, sprayed water or foam. Fire – intensive: sprayed water, water fog or foam.
Unsuitable extinguishing media	Full water-jet. Direct streams of water on melted, burning material must be avoided to prevent scattering the material and spreading fire.

5.2. Special hazards arising from the substance or mixture

Special hazards in case of fire	Irritating gases and dense smokes are produced by the combustion. Carbon oxides (CO and CO_2) may develop.
Special hazards of explosion	During the transport of the product (e.g. filling or emptying of the silos, tanks, hoppers, etc.), dust particles may be formed in the production facilities, which following its accumulation, may ignite or explode in the consequence of electrostatic charge induction. Measures against electrostatic charging are therefore needed (grounding, measures for safe electrostatic discharging) for these facilities.
5.3. Advice for firefighters	Full protective clothing and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel	Spilled pellets may cause slipping hazard and the risk of tumbling. Vacuum or sweep up spilled material. Wear appropriate personal protective equipment during all clean-up activities. Avoid areas with the scattered air-born dust. Do not inhale the dust. Avoid contact of the melted material with the skin or eyes. In case of hazards evacuate personnel to a safe area.
6.1.2. For emergency responders	In case of great fire, protect persons, storage facilities, and all other objects near the fire with the water spray. Evacuate area. Provide adequate ventilation. Consider the risk of potentially explosive atmospheres. Full protective clothing and self-contained breathing apparatus is required.
6.2. Environmental precautions	Do not drain spilled material into the canalization system. Do not flush into surface water. Should not be released into the environment. It is recommended to implement systems and practices to prevent accidental release of plastics into the environment. Ensure your worksite is properly set up to prevent loss and assist cleanup.
6.3. Methods and material for containment and cleaning up	For proper containment it is recommended to install area-specific containment systems in each pellet handling area and facility-wide containment systems which are effective in controlling releases covering large area and large volumes of pellets. Storm drain screens should be applied with the mesh smaller than the smallest pellet handled at the facility. Clean the existing storm drains regularly to prevent drain clogging and overflow. Baffles, skirts and booms in containment ditches or pond should be installed, and surface skimmers or vacuum systems should be used to remove accumulated pellets. Employ dry clean-up methods whenever possible. Install central vacuum systems where practical. Sweep or vacuum spilled material with the use of non-sparking tools/equipment and place it in appropriate packages (big-bags) or clean containers designed to minimize the possibility of breakage and material leakage. Provide catch trays for use at all car/truck unloading valves. Install connecting hoses equipped with valves that will close automatically when the connection is broken. According to the level of contamination, the spilled material may be resold, recycled, or otherwise disposed in compliance with the relevant waste management legislation.

6.4.Reference to other sections	For personal protection refer to Section 8 of this Safety Data Sheet. For disposal considerations please refer to Section 13 of this Safety Data Sheet.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling	Prevent dust formation and electrostatic discharging. Ensure adequate ventilation. Do not breathe dust. Take all precautionary measures to ensure fire protection (working with open flames is prohibited, shut off potential ignition sources, no smoking). Prevent accidental releases of the material into the environment during the manipulation.
7.2. Conditions for safe storage, including any incompatibilities	Storage facilities must fulfil all fire safety requirements for buildings, and all electrical appliances must be compliant with the applicable regulations. Store the product in dry, well-ventilated roofed storehouse. Protect from direct sunlight. Recommended storage temperature: -20°C to + 40°C. The product should be kept at least 1 m from the heat sources. Prevent accidental releases of the material into the environment during the storage. Stacking of pallets is not advised.
7.3. Specific end use(s)	Not specified.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

Chemical identity	Type (8-hour TWA)	Exposure Limit in mg/m^3
Polypropylene dust	PEL (OSHA)	15 - total dust 5 - respirable dust
	TLV (ACGIH)	10 - inhalable dust 3 - respirable dust
	OEL (Latvia)	5
	PEL (Czech Republic)	5
	NPEL$_c$ (Slovakia)	5 - inhalable dust
	PC (China)	5 - inhalable dust
Polypropylene, homopolymer (unstabilized)	IPRD (Lithuania)	10

8.1.2. Recommended monitoring procedures	Recommended method for monitoring of polypropylene dust in air on workplace: gravimetry and dustmeter.
8.1.3. Air contaminants formed	Not specified.
8.1.4. DNEL and PNEC	Not specified.
8.1.5. Control banding recommendation	Not specified.

8.2. Exposure controls	
8.2.1. Appropriate engineering controls	Provide readily accessible eye wash stations and safety showers. In case of dust formation use adequate ventilation. Installation of the exhaust ventilation equipment over the processing appliances is recommended to exhaust vapours from the melted polypropylene.
8.2.2. Individual protection measures, such as personal protective equipment	Suitable protective and certified equipment should be applied. The workers are recommended to wear personal protective equipment as follows: Eye/face protection: safety goggles or safety glasses in accordance with EN ISO 16321. Skin protection: protective clothing in accordance with EN ISO 13688. *Hand protection*: suitable protective gloves in accordance with EN ISO 374. *Legs:* closed shoes, slip-resistant in accordance with EN 13832. Respiratory system: ventilation system exhausting dust and vapours is normally required, if not adequate, use respirator in accordance with EN 143. Thermal hazards: While handling with high-temperature processing, use gloves made of para-aramid/carbon composite fabric, with the heat insulation to min. 270°C and leather sleeves for the forearm protection.
8.2.3. Environmental exposure controls	Implement systems and practices to avoid accidental release of plastics into the environment.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- Physical state: solid pellets
- Colour: Translucent to white
- Odour: slight
- Melting point: 120 - 190°C
- Boiling point: no data available
- Flammability: polymer will burn but does not easily ignite
- Lower explosion limit (dust): 32 g/m^3
- Upper explosion limit: no data available
- Flash point: no data available
- Auto-ignition temperature: no data available
- Decomposition temperature: no data available
- pH-value: no data available
- Kinematic viscosity: no data available

- Solubility: insoluble in water
- Partition coefficient n-octanol/water (log value): no data available
- Vapour pressure: no data available
- Density and/or relative density: 0,890 - 1,000 g/cm^3
- Relative vapour density: no data available
- Oxidizing properties: none
- Particle characteristics: pellets,

9.2. Other information	
9.2.1. Information with regard to physical hazard classes	Not specified.
9.2.2. Other safety characteristics	Restricted as synthetic polymer microparticles according to entry no. 78 of the Annex XVII of the REACH Regulation (EC) No 1907/2006

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	The product is stable at normal handling and storage conditions.
10.3. Possibility of hazardous reactions	No dangerous reactions known under normal conditions of use. Hazardous polymerization will not occur. No oxidizing properties.
10.4. Conditions to avoid	The product is stable under recommended storage and handling conditions. Avoid heating over 300°C. Keep away from the sources of ignition and electrostatic discharges.
10.5. Incompatible materials	Chlorine, fluorine, strong oxidizing agents.
10.6. Hazardous decomposition product	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Decomposition under the higher temperatures in the air atmosphere may produce CO, CO_2 and H_2O.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

- 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: no data available
- Aspiration hazard: no data available

11.2. Information on other hazards	The product is not classified as hazardous to human health. This product is not acutely toxic. Harmful effects not anticipated from swallowing small amounts. May cause choking if swallowed.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity	Not specified.
12.2. Persistence and degradability	This product is not readily biodegradable. It is a foreign substance in the environment with very slow degradation. The degradation is mainly caused by ultraviolet irradiation. The product is insoluble in the water.
12.3. Bioaccumulative potential	Not specified.
12.4. Mobility in soil	Not specified.
12.5. Results of PBT and vPvB assessment	No data available.
12.6. Endocrine disrupting properties	No data available.
12.7. Other adverse effects	Not specified.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Recommended methods for the product disposal	Depending on the level of contamination, the product waste may be reused, resold, recycled or otherwise disposed in compliance with the relevant waste management legislation. Do not dump polymer waste into any sewers, on the ground, or into any stormwater system. In case of accidental spillage of the product (pellets of polymer) avoid product entering the canalization system. Vacuum or sweep mechanically and transport for further processing, recycling, or dispose in compliance with the relevant waste management legislation. All collected waste material should be packed, labelled, transported and disposed of or reclaimed with "zero pellet loss" procedures and other applicable, good engineering practices.
Recommended methods for the disposal	Recycling, reselling, energetic waste utilization, use as alternative fuel.

SECTION 14. TRANSPORT INFORMATION

14.1. UN number or ID number	Not regulated.
14.2. UN proper shipping name	Not regulated.
14.3. Transport hazard class(es)	Not regulated.

14.4. Packing group	Not regulated.
14.5. Environmental hazards	Not regulated.
14.6. Special precautions for user	Not regulated.
14.7. Maritime transport in bulk according to IMO instruments	Not regulated.

SECTION 15. REGULATORY INFORMATION

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

The synthetic polymer microparticles supplied is subject to conditions laid down by entry 78 of Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council. This restriction towards placing of polymer microplastics on the market shall not apply to synthetic polymer microparticles, as substances on their own or in mixtures, for use at industrial sites.

The product is not included in the Candidate List of Substances of Very High Concern for Authorisation.

The product is not included in the Annex XIV of the REACH Regulation (EC) No 1907/2006.

The product is not classified as a hazardous substance or mixture according to the CLP Regulation (EC) No 1272/2008 of the European Parliament and of the Council.

The product is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

The product is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants.

The product is not subject to Regulation (EU) No 2024/590 of the European Parliament and of the council of 7 February 2024 on substances that deplete the ozone layer.

15.2. Chemical safety assessment	No chemical safety assessment has been carried out.

SECTION 16. OTHER INFORMATION

Changes made to the previous version of the safety data sheet	1. First version of the SDS 2. Updated sections 1-16.

Explanation of abbreviations and acronyms:

- % w/w, weight concentration
- ACGIH, The American Conference of Governmental Industrial Hygienists
- CAS, unique identifier for chemical assigned by the Chemical Abstracts Service
- CLP, 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
- DNEL, Derived No Effect Level - level of chemical exposure above which humans should not be exposed [mg/kg, mg/l]
- EN, European Standard
- ID – identification number of dangerous goods, hazardous substances and articles
- IMO**,** International Maritime Organization
- IPRD, Long-term exposure limit value
- ISO, International Organisation for Standarization
- $NPEL_c$, the highest permissible exposure limits for solid aerosols with a predominantly irritating effect
- OEL, Occupational Exposure Limit
- OSHA, Occupational Safety and Health Administration
- PBT, Persistent, Bio-accumulable, Toxic
- PC, Permissible Concentration
- PEL, Permissible Exposure Limit
- PNEC, Predicted no-effect concentration - estimated concentration of a given chemical which marks the limit at which below no adverse effects of exposure in an ecosystem are measured [mg/kg, mg/l]
- PP, Polypropylene
- REACH, Regulation (EC) no. 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals
- TLV, Threshold Limit Values
- SDS, Safety Data Sheet
- STOT - Specific Target Organ Toxicity
- TWA, 8-hour total weight average permissible exposure limit
- UN, United Nations
- vPvB, very Persistent and very Bioaccumulative

Disclaimer: The information given is in accordance with the current state of knowledge and experience, and with EU regulations. It contains the information necessary to secure safety and health, and environmental protection. These data are not a substitute for quality specifications and must not be regarded as a guarantee for the suitability and useability of this product in a specific application. It is sole responsibility of the customer to comply with applicable local regulations. The information contained in this safety data sheet has been obtained from sources believed to be reliable. Nevertheless, the information is provided without any guarantee as to its correctness. Certain information presented and conclusions drawn in this document have been obtained from external sources. 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 take no responsibility and expressly disclaim liability for loss, damage or costs arising from handling, storage, use or disposal of this product. If the product is used in the manufacture of another product, the information contained in this safety data sheet may not apply. Thorough material compatibility and safety testing should be carried out before using this product in any new experimental research or technological process. Ensure compliance with all national/local regulatory legislation. This document has been prepared with the utmost care, however, no liability is taken for injuries resulting from its use.

END OF SAFETY DATA SHEET