

1. Identification of the substance and manufacturer	
1.1) Identification of the product.	<p><b>ISONYL 6</b></p> <p>In labelling and technical documents the grade designation is followed by some abbreviations that indicate some technical characteristics.</p> <p><u>If among these abbreviations there are FR or HF or VO or V2, then the product is a <i>flame retardant</i> grade. Information written in <i>cursive</i> are referred ONLY to these grades.</u></p>
1.2) Use of the substance/preparation:	Synthetic polymer based on polyamide 6 (poly-caprolactam) with dispersed reinforcements, additives and colourants, used only in the industrial activities of injection moulding and extrusion. No other uses are known or allowed for this product.
1.3) Manufacturer/supplier:	<p>SIRMAX SpA. via Fabbrega 18 Isola Vicentina (VI)</p> <p>Production: via Dell'Artigianato, 42 Cittadella (PD) – Via Decime, 10 Tombolo (PD)</p> <p>Safety data sheet emission: Quality Office: via Dell'Artigianato, 42 Cittadella PD, tel. o.h. 049 9441111 - fax 049 9441112 - <a href="mailto:mfabris@sirmax.it">mfabris@sirmax.it</a></p>
1.4) Service to contact for the safety data sheets:	<p>SIRMAX SpA: Quality Office: via Dell'Artigianato, 42 Cittadella PD</p> <p>tel. o.u. 049 9441111</p>
2) Hazards identification	
2.1) Classification system:	According directives CEE 1999/45, 67/548 ,76/769 and following amendments this product is not classified as dangerous.
2.2) Information pertaining to particular dangers for man and environment:	The molten product adheres to the skin and causes burns. Spilled material may present a slipping hazard. Possible production of electrostatic chargings when used. The working steams can irritate the eyes as well as the respiratory tract.
3) Composition/Data on components	
3.1) Composition of the product:	<p>Preparation of the following components (<u>not dangerous</u>)</p> <p>PA6: Polyamide 6 (CAS 25038-54-4)</p> <p>Dispersed additives, not dangerous.</p> <p>Mineral fillers such as calcium carbonate and /or talc and/or chaolin or glass fiber, only for the reinforced grades (GF).</p> <p>Colourants and pigments, (only for coloured versions).</p>
3.2) Presence of dangerous components:	<p><i>Some dangerous additives could be present only in the flame retardant grades. Here is the list of such possible substances.</i></p> <p>➤ <i>Zinc Borate, CAS number 12767-90-7; N : Dangerous to the environment R: R50/53</i></p>
3.4) R phrases	<p>No R phrases for not flame retardant grades, while for <i>flame retardant grades R50: Very toxic to aquatic organisms.</i></p> <p><i>R53 : May cause long-term adverse effects in the aquatic environment..</i></p>

4) First aid measures	
General information:	At room temperature the product is neither an irritant nor gives off hazardous vapours. The measures listed below apply to critical situations (fire, incorrect process conditions, thermal degradation)
After inhalation:	In case of excessive inhalation of fumes move the person to fresh air. Call for medical help. Keep the person warm, if necessary give mouth-to-mouth resuscitation, or artificial respiration.
After skin contact:	After contact with the molten product, cool rapidly with cold water. Do not pull solidified product away from the skin. Seek immediate medical advice.
Eye contact:	Remove the product from the eye, rinse the opened eye for several minutes under running water.
Swallowing:	Get medical advice if necessary. No specific measures have to be taken if the product is swallowed.
5) Fire fighting measures	
Suitable extinguishing agents:	Water haze - Foam - Carbon dioxide - Chemical powder
Special hazards caused by the material, its products of combustion or resulting gases:	In case of fire it can release : water (H <sub>2</sub> O), carbon dioxide (CO <sub>2</sub> ), and when lacking oxygen (O <sub>2</sub> ), carbon monoxide (CO). In case of fire it can release also cyanidric acid (HCN), ammonia, nitrogen oxides, aliphatic aldehydes. The products of the burning are dangerous.  <i>Only for flame retardant grades (check for FR or HF or V0 or V2 in the grade designation) dangerous compounds of bromine, antimony and phosphorous can be released.</i>
Protective equipment:	Put on breathing apparatus.
6) Accidental release measures	
Person - related safety precautions:	No specific measures are necessary. See point 8
Measures for environmental protection:	No special measures required. See points 12 and 13.
Ways for cleaning/collecting:	See also point 13 . Small spills: Put into a labelled container and provide safe disposal. Large spills: Act as during a limited release. Recycle product or dispose properly.
Additional information:	Collect spilled polymer: It could cause falls (danger of slipping). Keep it far from ignition sources.
7) Handling and storage	
7.1) Information for safe handling:	When bringing the material to processing temperatures gases might develop, forming:hydrocarbon substances with low molecular weight and their oxidation products solvent residues traces of amines and acids. Provide appropriate ventilation for such processing conditions.  Take precautionary measures against explosion risks, as all types of polymers may develop dust during transporting or grinding of granules.

	<p>Do not overpass the suggested process conditions (temperatures), since the released gases are dangerous.</p> <p>As for any kind of polymer, if during transport or handling dust is produced, take precautionary measures to prevent the formation of static electricity.</p>
7.2) Requirements to be met by storerooms and containers:	<p>Take precautionary measures to prevent the formation of static electricity. Ground equipment electrically. Electric safety equipment. Do not smoke. Open flames prohibited. Store the product in bags, autosilos, container, or large cartons. Protect from heat and sunrays. Store in a dry place. Do not stack the big bags or the octabins or the platforms. Storage in a warm place (&gt;60°C) can cause softening of the granules and instability of the bags.</p>
<b>8) Exposure controls and personal protection</b>	
8.1) Components with limit values that require monitoring at the workplace:	CAS 105-60-2 caprolactam, check for the national exposure limit.
Additional information:	See points 7 and 9.
8.2) General protective and hygienic measures:	<p>Do not eat or drink while working. No smoking. Provide system for collecting the vapours which are created during the working process.</p> <p>Avoid the formations – when purging the press – of great agglomerates of molten material: since the product has a low thermal conductivity, it solidifies quite quickly externally, while the inner part remains molten, at high temperature for prolonged times. This could be the cause for thermal degradation. Always wait for the complete solidification and cooling of the material coming from the press purges before handling them. Solidification in air is slow. Do not underestimate that the inner part stay molten for long times, so do not crash the purged agglomerates. Molten product spill is possible.</p>
Breathing equipment:	If appropriate ventilation is not available use face mask when handling the molten product.
Protection of hands:	Heat resistant gloves.
Eye protection:	Not required.
Body protection:	Normal overalls.
8.2.2) Environmental exposition	See also point 12. No adverse effects for the environment and living beings are know.
<b>9) Physical and chemical properties</b>	
9.1) General information	
Form:	solid, granulate.
Colour:	as specified in the product designation.
Odour:	Odourless
9.2) Relevant information for health, safety and environment:	
pH	Non applicable

Boiling point	Non applicable
Flash point	Not applicable (see attachment to guideline 92/69/EEC, A.9)
Explosion danger	Not explosive (see also point 7).
Oxidising properties:	None
Density at 23°C:	from 1,10 to 1,40 Kg/dm <sup>3</sup>
Water solubility:	Insoluble
Vapour pressure	Negligible
9.3) Further data:	
Solubility:	Partially/completely soluble in some acids
Melting point/ melting range	220-240 ° C
Ignition temperature:	> 450 ° C
Decomposition temperature:	> 300 ° C
<b>10) Stability and reactivity</b>	
10.1) Conditions to be avoided:	The product is stable at normal handling, storage and process conditions (require to SIRMAX the process data guidelines). Decomposition begins at temperatures higher than 300°C, with the release of decomposition gases and products.
10.2) Substances to be avoided:	Strong oxidation agents, that enhance the product degradation. No dangerous reactions are known, nor exothermic reactions (except combustion) nor degradation to unstable products.
10.3) Dangerous products of decomposition:	No hazardous decomposition products known at room temperature. In case of fire or for process temperatures, see points 5 and 7.
<b>11) Toxicological information</b>	
Acute toxicity:	Vapours and gases of the product, generated at high temperature can have an irritant effect to the eyes and the breathing apparatus.
Primary irritant effects:	Skin: no irritant effects. Eyes: no irritant effects. No sensitizing effect known.
Additional toxicological information:	According to our experience and the information provided to us, when used and handled according to the exposed indications, the product does not have any harmful effects.
<b>12) Ecological information</b>	
12.1) Ecotoxicity	The product is not toxic, but small particles can have physical effects in aquatic and soil organisms.
12.2) Mobility	Having a density not far from that of the water, the product can easily be transported by surface waters, or can float.
12.3) Persistence and biodegradability	The product is not biodegradable, do not throw out in the environment.

12.4) Bioaccumulation	There is no bioaccumulation.
12.6) Other adverse effects	There are no available informations from which adverse effects for the environment or living beings can be desumed.
<b>13) Disposal considerations</b>	
Suggestions:	Check the possibility of recycle: as a thermoplastic, the material can be re-used or recycled according to the regulations of Guideline EG 94/62. Disposal through controlled incineration or authorised waste dump. European waste catalogue 070213  Incineration and disposal must be done according the european and national laws.
<b>14) Transport information</b>	
Transport/Additional information:	According to national and international guidelines, which regulate the road, rail, air, and sea transport, this product is classified as not dangerous.
<b>15) Regulatory information</b>	
Chemical Safety Assessment	
Designation according to EC guidelines:	The material is not subject to classification according to EC lists and other sources of literature known to us. Observe the normal safety regulations when handling chemicals.
Further regulations, restrictions and prohibition regulations	Generally all national regulations regarding this product
<b>16) Other information</b>	
	The information supplied has been based upon the current level of information available, for the purpose of specifying the requirements regarding environment, health and safety in conjunction with the product. They are not to be interpreted as a warranty for specific product characteristics. Sirmax takes no responsibility for inappropriate use, processing and handling by purchasers and users of the product. These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.  R phrases reported in this document ( <i>only for flame retardant products</i> ): <i>R50: Very toxic to aquatic organisms.</i>  <i>R53: May cause long-term adverse effects in the aquatic environment.</i>