Norlip AKTIESELSKAB Svejsegangen 12 • 2690 Karlslunde

FM 599350

Produceret for : PAPERLINX A/S
Bastrupgaardvej 8-10
7500 Holstebro

Karlslunde d. 8/23/2013

OVERENSSTEMMELSESERKLÆRING

Identifikation af produktet

Produktnummer	Alle varenumre der er inkluderet på nedenstående liste
Produktnavn	Low Density Polyethylen poser
Anvendt råvare	INEOS® LDPE 22H594
Anvendelse	Fede,tørrede, ferske fødevarer samt fødevare i lage (alkohol, vand og eddike)
Fødevaretype	Alle typer
Kontakttid	10 dage
Kontakttemperatur	Max. 40° i 10 dage – eller max. 70° i 2 timer – eller stuetemperatur i hele produktets holdbarhedstid Kan også anvendes til frost ned til -35°, såfremt folien kvaliteten er min. 40 My.

Identifikation af producenten

Firmanavn	Norlip A/S
Adresse	Svejsegangen 12
	DK 2690 Karlslunde
Kontaktperson	Jesper Philipsen
e-mail adresse	jp@norlip.dk
Website	www.norlip.dk - på website findes link til FVST's besøgsrapporter

Positivliste

Polymeren består udelukkende af monomerer og indgangsstoffer, der forekommer på positivlisten (Annex I) i EU-forordning 10/2011/EC og efterfølgende ændringer
Underskrift: 23/08/2013 

SMG (Specifikke Migrations Grænser)

Alle indgangsstoffer er kontrolleret i Annex I i forordning 10/2011/EC og efterfølgende ændringer, og følgende stoffer har SMG-værdier- ingen oplyst

Kemisk navn	CAS nr.	REF. no.	SMG	Mængde i produktet (%)

Dual use additiver

Forekommer der dual use additiver i produktet?	
Ja:	☑
Nej:	☐

Hvis ja – hvilke dual use additiver er tilsat produktet?

Kemisk navn	Cas. Nr.	Mængde i produktet (‰)
Alpha-tocopherol		0,85 ‰
Talcum		0,50‰

Funktionel barriere

Indeholder produktet en funktionel barriere? Hvis ja, ønskes dokumentation for, at den er i overensstemmelse med EU-forordning 10/2011/EC	
Nej	☑
Ja	☐
Den funktionelle barriere er i overensstemmelse med EU-forordning 10/2011/EC	
Underskrift: 23/08/2013	

Global migrationstest

I overensstemmelse med den fremtidige brug af produktet, skal der udføres globale migrationstest i henhold til direktiv 82/711/EC og 85/572/EC. En kopi af migrationstesten er medsendt. Denne "gamle" testmetode gøres stadig gældende frem til udgangen af 2014, hvorefter nye migrationstest foretages efter den nye metoder.

Specifik migrationstest

Hvis der er angivet SMG-værdier ovenfor skal produktet testes for specifik migration i henhold til EU-direktiv 82/711/EC og 85/572/EC. Der er ikke foretaget specifik migrationstest da INEOS 22H594 kun indeholder stoffer der er omfattet af positivlisten Annex I i forordning 10/2011/EC, og er fremstillet af stoffer, der ikke er pålagt restriktioner mht. specifik migration. Dette ses på vedhæftede dokument fra INEOS - **Regulatory Compliance Certificate** for råvare 22H594.

Overensstemmelse

Produktet er fremstillet i henhold til retningslinierne i EU-forordning 2023/2006 og forårsager ingen fare for menneskers sundhed eller miljøet i henhold til artikel 3 i rammedirektiv 1935/2004/EC. Produktet er i overensstemmelse med den gældende EU-lovgivning (EU-forordning 10/2011/EC og efterfølgende ændringer). Vi forpligter os hermed til at informere om ændringer i produktet.	
Dato	23-08-2013
Navn	Jesper Philipsen
Underskrift	

POLYETHYLENEMBALLAGE MED OG UDEN TRYK
BÆREPOSER RULLEPOSER POSER SÆKKE

Norlip

STANDARDPOSER LDPE

VARENR.	Bredde	Længde	Tykkelse		Bemærk	Antal/Krt.
01-091825	90	180	0,025	mm		1000
01-091850	90	180	0,050	mm		500
01-111825	110	180	0,025	mm		2000
01-152525	150	250	0,025	mm		1000
01-153025	150	300	0,025	mm		1000
01-153050	150	300	0,050	mm		500
01-153070	150	300	0,070	mm		500
01-183625	180	360	0,025	mm		1000
01-183625-0	180	360	0,025	mm	m/huller	1000
01-183650	180	360	0,050	mm		500
01-202425	200	240	0,025	mm		1000
01-204025	200	400	0,025	mm		1000
01-204025-0	200	400	0,025	mm	m/huller	1000
01-204050	200	400	0,050	mm		500
01-204070	200	400	0,070	mm		500
01-254525	250	450	0,025	mm		1000
01-254525-0	250	450	0,025	mm	m/huller	1000
01-255025	250	500	0,025	mm		1000
01-255025-0	250	500	0,025	mm	m/huller	1000
01-255050	250	500	0,050	mm		500
01-255070	250	500	0,070	mm		500
01-275025	270	500	0,025	mm		1000
01-275025-0	270	500	0,025	mm	m/huller	1000
01-275050	270	500	0,050	mm		500
01-283625	280	360	0,025	mm		1000
01-283625-0	280	360	0,025	mm	m/huller	1000
01-303525	300	350	0,025	mm		1000
01-304025	300	400	0,025	mm		1000
01-306025	300	600	0,025	mm		1000
01-306025-0	300	600	0,025	mm	m/huller	1000
01-306050	300	600	0,050	mm		500
01-306070	300	600	0,070	mm		500
01-353025-0	350	300	0,025	mm	m/huller	1000
01-406025	400	600	0,025	mm		1000
01-406025-0	400	600	0,025	mm	m/huller	1000
01-406050	400	600	0,050	mm		500
01-505025	500	500	0,025	mm		1000

VARENR	Bredde	Fals	Længde	Tykkelse		Bemærk	Antal/Krt.
32-F1	70	20	230	0,025	mm		1000
32-F2	90	25	230	0,025	mm		1000
32-F3	90	25	340	0,025	mm		1000
32-F4	107	25	235	0,025	mm		1000
32-F5	120	35	300	0,025	mm		1000
32-F6	120	35	340	0,025	mm		1000
32-F7	120	35	380	0,025	mm		1000
32-F8	120	35	480	0,025	mm		1000

Eurofins Product Testing A/S
Smedeskovvej 38
DK-8464 Galten

Telefon 70 22 42 66
Telefax 70 22 42 55
eurofins@eurofins.dk
www.eurofins.dk

Norlip
Att.: Jesper Philipsen
Svejsegangen 12
2690 Karlslunde

Dato
3. december 2009
Deres ref.
-
Vores ref.
768645Rev1/IB /JH

Analyserapport - Materialetest

Prøvemateriale

Sagsidentifikation	Migrationstest plastfolie, LDPE
Prøvemodtagelse	6. Marts 2009
Antal / Prøvetype	Plastfolie fremstilet af en råvare fra INEOS, varenummer 22H594: 768645-01: LDPE
Analyseperiode	9. Marts – 7. April 2009

Anvendte metoder

Metodenr.	Princip	Parameter	Detektionsgrænse	Analyseusikkerhed ①
EN 1186-3	Gravimetri	Global migration til vand, 3% eddikesyre og 10 % ethanol	1 mg/dm^2	15% (RSD)
EN 1186-2	Gravimetri og Gaskromatografi (GC/FID)	Global migration til olivenolie	2 mg/dm^2	15% (RSD)

Princip for migration: Den totale migration fra prøverne til vand, 3% eddikesyre, 10% ethanol, olivenolie og vand bestemmes ved eksponering i 10 dage timer ved 40 °C. Testen gennemføres ved neddypning af prøveemner i fødevaresimulanten. Testen er foretaget i henhold til EN 1186-2 og EN 1186-3. Efter eksponering, hvor de opløselige komponenter migrerer fra materialet til simulanten, fjernes emnet fra simulanten.

Migration til 3% eddikesyre, 10% ethanol og vand: bestemmes ved inddampning af simulanten og inddampningsresten bestemmes ved vejning og angives som migrationen fra emnet til fødevaresimulanten.

Migration til olivenolie: Emnet der har været neddyppet i simulanten aftørres og vejes. Herefter fjernes adsorberet olie ved ekstration og bestemme den ekstraherede olie ved GC/FID analyse. Emnets vægt korrigeres for den ekstraherede olie og migrationen bestemmes som vægttab af emnet

Analysen udføres som tredobbeltbestemmelse.

① Dog mindst halvdelen af detektionsgrænsen absolut

Eurofins Product Testing A/S

Inge Bondgaard
Kemiingeniør

John Hansen
Civilingeniør, kemi

Analyseresultater

Enhed: **mg/dm^2**	**Migration til 3 % eddikesyre**			
Prøve	**1. bestemmelse**	**2. bestemmelse**	**3. bestemmelse**	**Gennemsnit**
LDPE folie, INEOS varenummer 22H594	< 1	< 1	< 1	< 1

< betyder mindre end

Enhed: **mg/dm^2**	**Migration til 10% ethanol**			
Prøve	**1. bestemmelse**	**2. bestemmelse**	**3. bestemmelse**	**Gennemsnit**
LDPE folie, INEOS varenummer 22H594	< 1	< 1	< 1	< 1

< betyder mindre end

Enhed: **mg/dm^2**	**Migration til olivenolie***			
Prøve	**1. bestemmelse**	**2. bestemmelse**	**3. bestemmelse**	**Gennemsnit**
LDPE folie, INEOS varenummer 22H594	< 2	< 2	< 2	< 2

< betyder mindre end
* Denne analyse er ikke omfattet af akrediteringen. Er dog udført under kvalitetsstyringssystemet ISO 17025 og er pr. 7. oktober 2009 også omfattet af akkrediteringen.

Enhed: **mg/dm^2**	**Migration til vand**			
Prøve	**1. bestemmelse**	**2. bestemmelse**	**3. bestemmelse**	**Gennemsnit**
LDPE folie, INEOS varenummer 22H594	< 1	< 1	< 1	< 1

< betyder mindre end

Kommentar

I henhold til BEK nr 167 af 03/03/2009 overholder plastfolien, LDPE, INEOS varenummer 22H594, kravet om en migration på maksimalt 10 mg/dm^2 for vand, 3% eddikesyre 10% ethanol og olivenolie som simulanter.

Declaration of Compliance

Low Density Polyethylene grade

22H594

Table of contents

Food-contact EU

Monomers and additives used to manufacture this grade are listed in Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food or national legislations as listed below.

This grade also meets the relevant requirements of Regulation (EC)1935/2004 (27/10/2004) on materials and articles intended to come into contact with food.

Migration tests carried on this type of polymer, under the conditions 10 days at 40°C, in the four standard food simulants show that the Overall Migration Limit of 60 mg/kg or 10 mg/dm² food is not exceeded.

No monomers subject to restriction (Specific Migration Limit or Quantitative Maximum) are used.

No additives subject to restriction (Specific Migration Limit or Quantitative Maximum) are used.

Alpha-tocopherol and talc are approved as direct food additives. They are present, as additives, in the above grade.

Austria: Kunststoffverordnung Nr. 476/2003 und Änderungen 242/2005, 452/2006, 325/2007, 140/2009, 196/2010 und 45/2011.

Belgium: Koninklijk Besluit - Arrêté Royal 3/07/2005 as amended and Arrêté Royal 8/3/2009

Czech Republic: Vyhlaska Ministerstva zdravotnictvi c. 38/2001 Sb. 19/01/2001, amended by Vyhlaskami 186/2003 Sb., 207/2006 Sb., 551/2006 Sb., 271/2008 Sb., 386/2008 Sb., 127/2009 Sb.

Denmark: Fødevaredirektoratets Bekentgørelse nr. 1068 af 13/11/2009

England: Statutory Instruments 2009 No. 205 and BPF-BIBRA (1995)

Finland: KTM Asetukset 953/2002, 141/2005, 181/2005, 762/2006, 1065/2007, 10/7/2009 ja 106/2011

France: Brochure N°1227 Edition 2002, Arrêté du 02/01/2003, Arrêté du 29/03/2005, Arrêté du 09/08/2005, Arrêté du 19/10/06, Arrêté du 25/4/2008, Arrêté du 19/11/2008 et Arrêté du 03/09/2010

Germany: Bedarfsgegenständeverordnung 23/12/1997 und Änderungen vom 21/12/2000, 07/04/2003, 13/07/2005, 30/11/2006, 20/12/2006, 08/08/2007, 11/02/2008, 30/4/2008, 16/06/2008, 23/09/2009 sowie BfR Empfehlungen A - III, Polyethylene, Stand. 01/06/2010

Greece: AXE decision n° 458/2003 modified by decision n° 454/2008

Ireland: Regulations 2009, Rule N°56

Italy: Decreto Ministeriale 21/03/1973 and subsequent amendments including D.M. of 23/4/09, N° 144

Netherlands: Warenwet (2006) Hoofstuk 1, Kunststoffen

Norway: Sosial-og helsedepartementets forskrift of 21/12/1993, n° 1381

Portugal: Decreto Lei N. 29/2009 of 2/2/2009

Spain: Real Decreto 103/2009 of 6/02/09

Sweden: Statens livsmedelsverks kungörelse LIVSFS 2003:2 och ändr. LIVSFS 2004:31, 2005:14, 2005:28, 2006:6, 2006:20, 2008:7, 2009:2, 2011:2

Switzerland: Verordnung der EDI über Bedarfsgegenstände 23/11/2005, 3. Abschnitt Bedarfsgegenstände aus Kunststoff

Whereas Ineos Olefins & Polymers Europe supplies to its customers the adequate information to allow them to fulfil their own responsibilities, the converters do have to check and confirm that the final article meets both the technical and regulatory requirements of the application.

Food contact US

This product is in compliance with Title 21 Code of Federal Regulations (CFR, 2011 Edition) Olefin polymers parts 177.1520, a(2) (c) Specifications 2.1. Type of food I to IX described in Table 1 of § 176.170(c) of this chapter under conditions of use C to H described in Table 2 of § 176.170(c) of this chapter promulgated under the Federal Food, Drug and Cosmetic Act.

Toys

The above grade meets the requirements of the European Standard EN 71 part 3 and 9, Edition 1995, Filing n° S51-214, Safety of Toys migration of certain elements. Since this grade also meets the requirements for food contact legislations, it is thus suitable for the manufacture of toys and parts of toys.

The above product also meets the relevant requirements of Directive 2005/84/EC.

Phthalates

Phthalates are not used as additives or raw materials in the manufacture of the above grade.

Bovine Spongiform Encephalopathy (BSE)
Transmissible Spongiform Encephalopathy (TSE)

No products of animal origin are used as additives or raw materials in the manufacture of the above grade.

Genetically Modified Organism (GMO)

Among the large variety of polymer additives that we are using, only a few of them may be genetically modified. We would like to comment on the relevance of gene modification techniques to plastic materials. The most significant fact is that the starting substances or additives possibly deriving from genetically modified organisms based materials are manufactured through multi-step conversion and/or purification processes, involving aggressive conditions like high temperature and pressure as well as action of chemically reactive substances. The final plastic materials themselves are produced under high temperature conditions and are further submitted during conversion processes (extrusion, moulding) to high temperature for a significant period of time.

On the basis of current scientific knowledge, it can be stated that no DNA and no proteins from a given organism (genetically modified or not) can resist to such a series of treatments. Therefore, their presence in our polymers and in plastic articles manufactured from them is unexpected.

In conclusion, we confirm that the above grade is safe to be manufactured, processed and used, even if it is manufactured from starting substances or contain additives which may be of genetically modified organism's origin.

End-of life vehicles

This grade meets the relevant requirements of Directive 2000/53/EC as amended.

Heavy metals: RoHS, WEEE, Packaging Waste, CONEG

This grade meets the relevant requirements of the following Directives or Regulations:

- 2003/11/EC as amended
- 2002/95/EC (RoHS) as amended
- 2002/96/EC (WEEE) as amended
- Regulation (EC) 1907/2006, annex XVII, as amended in Regulation (EC) 1272/2008, repealing 76/769/EEC, amended by 2009/425/EC
- 94/62/EC (Packaging Waste Directive) as amended
- USA CONEG Regulation
- France: Décret n°98-638 du 20 juillet 1998

'N' substances

None of the additives used in the manufacture of the above grade are classified as dangerous to the environment with the symbol “N” in Annex 1 of the Directive 67/548/EEC (adapted to technical progress for the 29th time by Directive 2004/73/EC).

Recycling

This grade is recyclable. Mechanical recycling is the primary option, depending of the requirements of the application and the intended article specification.
It can also be valorized for energy recovery, its high calorific value is around 44 MJ/kg.
Polyolefins are neither biodegradable nor compostable.

Swiss VOC legislation

This product is without Volatile Organic Content (VOC) according to "Ordonnance sur la taxe d'incitation sur les composés organiques volatils (OCOV) du 12 novembre 1997".

Ozone layer-depleting agents

Chlorofluorocarbons (CFC's) and substances related to ozone depleting substances (as defined by the MONTREAL PROTOCOL and listed as class I & II substances by the US Clean Air Act) are not used as additives or raw materials in the manufacture of this grade.

None of the prohibited substances listed in Regulation 2037/2000/EC (Marketing and use of Ozone layer depleting substances) repealed by Regulation (EC) 1005/2209 is used as additives or raw materials in the manufacture of the above grade.

Nanomaterials and nanotechnology

Nanotechnology is as an important technology of the 21st century that will open up the door to new developments and performance enhancement of our products, in the area of mechanical strength, barrier properties, surface properties etc.
INEOS understand that these new materials will pose new Product Stewardship questions and challenges, and we are committed to treat them in a responsible way and in particular in full compliance with the related legislation, existing or still to be developed.
Today, INEOS don’t yet use nanomaterials in their commercial products, but our R&D teams are considering them as valid alternatives to existing solutions, and they could thus in a foreseeable future become part of some of our products.

REACH / SVHC

INEOS is committed to fully respect REACH legislation and will only use fully REACH compliant raw materials.

Polymers are exempt of registration; however, their raw materials must all be registered.

To check the compliance of this product with the next issues of the Candidate List of Substances for authorization, please consult the REACH page at www.ineospolyolefins.com (under "Technical Information").

Absence of substances and chemicals

None of the following substances are used as additives or raw materials in the manufacture of this grade: However, since we do not systematically perform specific tests to verify the absence of these substances, we cannot guarantee that there is no trace amount of these substances, as impurity or otherwise, in this grade.

- Allergens (as defined in Directive 2000/13/EC, as amended)
- Aromatic amines
- Asbestos
- Azodicarbonamide or semi-carbazide compounds
- Benzophenone, hydroxybenzophenone and 4-methyl benzophenone
- Biocides
- Bisphenol-A (BPA) and Bisphenol-F (BPF)
- Brominated flame retardants
- Chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC), hydrofluorocarbons (HFC)
- Decabromodiphenylether (decaBDE)
- 2-Ethylhexanoic Acid (2-EHA)
- Di(ethylhexyl) adipate (DEHA) and di(ethylhexyl) maleate (DEHM)
- Dimethyl Fumarate (DMF)
- Dioxins and furans
- Endocrine Disruptors listed in the Japanese authority list “Strategic Programs on Environmental Endocrine Disruptors '98 (SPEED '98) - Table-3: Chemicals Suspected of Having Endocrine Disrupting Effects”
- Epoxy derivatives:
  - BADGE [2,2-bis(4-hydroxyphenyl)propane bis(2,3-epoxypropyl) ether],
  - BFDGE [bis(hydroxyphenyl)methane bis(2,3-epoxypropyl) ether],
  - NOGE [novolac glycidyl ether]

  as defined in Directive 2002/16/EC amended by 2004/13/EC, repealed by the Regulation 1895/2005/EC
- Epoxidised Soya Bean Oil (ESBO)
- Formaldehyde (formol)
- Isopropyltioxanthone (ITX)
- Latexes
- Melamine and cyanuric acid
- Mercapto mix
- N-ethyl-o,p-toluolsulfonamide (NETSA) (CAS nb 1077-66-1)
- N-ethyl-p-toluenesulphonamide (NE-PTSA) (CAS nb 80-39-7)
- Nonylphenol and its derivatives
- Organo-tin compounds as tributyl-tin (TBT), dibutyl-tin (DBT), monobutyl-tin (MBT)
- Pentabromodiphenyl ether, octabromodiphenyl ether
- Perfluorinated tenside (PFT), Perfluorooctanoic acid (PFOA) & Perfluorooctane sulfonate (PFOS) listed in Directive 2006/122/EC
- Poly(aromatic hydrocarbons) according to US Environmental Protection Agency Method 610 (EPA 610)
- Polybrominated biphenyls (PBBs), polybrominated diphenyl ethers (PBDEs), polybrominated terphenyls (PBTs)
- Polychlorinated biphenyls (PCBs), polychlorinated terphenyls (PCTs), polychlorinated naphtalenes (PCNs)
- Polycyclic Aromatic Hydrocarbons (PAH)
- Polyethylene Glycol (PEG)
- Recycled products as defined by Regulation (EC) 282/2008
- Short chained chlorinated paraffins
- Silicone
- Tert-butyl-4-hydroxyanisole (BHA) and 2,6-di-tert-butyl-p-cresol (BHT)
- Thiuram mix
- Titanium Acetyl Acetone (TAA)

- Triclosan (2,4,4'-trichloro-2'-hydroxydiphenyl ether) (CAS nb 3380-34-5)
- Vinyl chloride monomer (VCM) and its polymers or copolymers (PVC, PVDC, …)
- Substances listed in:
  - California Proposition 65 State regulation
  - GADSL, "Global Automotive Declarable Substance List" 2011
  - IKEA Specification, IOS-MAT-0010, 2009-10-09, chapter 3 & 6
  - IKEA Specification, IOS-MAT-0054, 2009-10-09

GMP / Food contact

The production and distribution processes of this grade have been submitted to a systematic review in regards to Good Manufacturing Practices as defined by the framework Regulation (EC) 1935/2004 and the "GMP" Regulation (EC) 2023/2006 as amended.

As a result of this review, INEOS Olefins & Polymers Europe can state that the production and distribution processes of this product are compliant with the here-above mentioned Regulations.

This certificate will be updated when appropriate. Therefore, it is recommended to visit our website at least once a year.

It is the responsibility of the customer to check compliance of the final articles with the relevant legislation and applicable regulatory requirements including their restrictions.

Notice

SAFETY DATA SHEET

Date : 04/09/2007 Revision Date : / /

Low Density / Linear Low Density Polyethylene SDSPE02

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Information

Product name	Low Density / Linear Low Density Polyethylene 22H594

Manufacturer, importer, supplier

Supplier	INEOS Polyolefins
Emergency telephone number	***Carechem 24: +44 (0) 208 762 8322***
Other regulatory information	psnohreg@innovene.com

2. HAZARDS IDENTIFICATION

- *Physico-chemical properties*	No hazards resulting from material as supplied.
- *Properties affecting health*	No hazards resulting from material as supplied.
- *Environmental properties*	No hazards resulting from material as supplied.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	Weight %	CAS.	EINECS.
Polyethylene	0 - 100 %	9002-88-4	-
Ethylene Butene 1 Copolymer	0 - 100 %	25087-34-7	-
Ethylene Hexene 1 Copolymer	0 - 100 %	25213-02-9	-
Ethylene Butyl Acrylate Copolymer	0 - 100 %	25750-84-9	-
Ionomer Copolymer	0 - 100 %	28516-43-0	-
Ethylene Metacrylic Acid Copolymer	0 - 100 %	25053-53-6	-
Hazardous components	None		

4. FIRST AID MEASURES

- *Inhalation*	Move to fresh air. Consult a physician if necessary
- *Eye contact*	Cool skin rapidly with cold water after contact with hot polymer. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- *Skin contact*	Cool skin rapidly with cold water after contact with hot polymer.

5. FIRE-FIGHTING MEASURES

- *Suitable extinguishing media*	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- *Extinguishing media which must not be used for safety reasons*	High volume water jet

6. ACCIDENTAL RELEASE MEASURES

- *Personal precautions*	Ensure adequate ventilation, especially in confined areas. In case of insufficient ventilation wear suitable respiratory equipment.
- *Environmental precautions*	No special environmental precautions required

- Methods for cleaning up	Take up mechanically and collect in suitable container for disposal.

7. HANDLING AND STORAGE

Handling

- Safe handling advice	Preparation may charge electrostatically: always use earthing leads when transferring from one container to another. Avoid dust formation. In case of insufficient ventilation, wear suitable respiratory equipment. Provide for appropriate exhaust ventilation and dust collection at machinery.

Storage

- Technical measures/Storage conditions	Keep in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal protective equipment

- Respiratory protection	(P2) effective dust mask
- Hand protection	Latex gloves (ketone resistant)
- Eye protection	Safety glasses with side-shields
- Skin and body protection	Wear suitable protective equipment
- Hygiene measures	When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Ensure adequate ventilation, especially in confined areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Granules
Colour	Off-white
Odour	None
Density	< 1
Melting point/range	105 - 130 °C
Flash point	> 300 °C
Autoignition temperature	> 350 °C
Water solubility	None
Solubility in other solvents	None
Thermal sensitivity	Fumes risk of decomposition

10. STABILITY AND REACTIVITY

- Stability	Upon prolonged heating above 300 °C hazardous decomposition products may be released. Inhalation of vapours in high concentration may cause irritation of respiratory system.
- Materials to avoid	None
- Hazardous decomposition products	None

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Eye contact	Dust causes irritation to the eyes, skin and mucous membranes and may lead to toxic lung oedemas.
Skin contact	Dust causes irritation to the eyes, skin and mucous membranes and may lead to toxic lung oedemas.
Inhalation	Dust causes irritation to the eyes, skin and mucous membranes and may lead to toxic lung oedemas.

Chronic toxicity

Carcinogenic effects	No information available
Mutagenic effects	No information available
Reproductive toxicity	No information available

12. ECOLOGICAL INFORMATION

- Ecotoxicity effects	This product has no known eco-toxicological effects.

13. DISPOSAL CONSIDERATIONS

- Waste from residues / unused products	Can be landfilled or incinerated, when in compliance with the Environmental Protection (Duty of Care) Regulations 1991.
- Contaminated packaging	Dispose of in accordance with local regulations

14. TRANSPORT INFORMATION

Land transport

Class — Not classified as dangerous in the meaning of transport regulations.

Sea transport

Class — Not classified as dangerous in the meaning of transport regulations.

Air transport

Class — Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Symbol(s):	not regulated
R-phrase(s)	not regulated
S-phrase(s)	not regulated

16. OTHER INFORMATION

Signature	Product Stewardship
Language of Document	English

Low Density / Linear Low Density Polyethylene SDSPE02

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfil his obligations regarding the use of hazardous products. This information is not exhaustive. This does not exonerate the user from ensuring that legal obligations, other than those mentioned, relating to the use and storage of the product, do not exist.This is solely his responsibility.

22H594

Product Technical Information

LDPE for Blown film

22H594 is an autoclave, low density polyethylene grade for the production of thin blown films.

Applications

22H594 is intended for applications such as

- Thin shrink film
- General packaging film

Properties		Test Method	Value	Units
Physical				
Melt flow rate (190°C/2.16 kg)		ISO 1133	2.1	g/10 min
Density		ISO 1183	922	kg/m^3
Melting temperature		ISO 11357/03	111	°C
Vicat softening temperature		ISO 306	95	°C
Additive: antioxidant (Vitamine E)				
Additive: slip (500 ppm, Erucamide)				
Additive: antiblock (850 ppm, Talc)				
Film*				
Tensile strength	MD/TD	ISO 527-3	26/20	MPa
Strain @ break	MD/TD	ISO 527-3	350/600	%
Tensile modulus	MD/TD	ASTM D 882-A	200/210	MPa
Coefficient of friction	Dynamic	ISO 8295	0.1	-
Haze		ASTM D 1003	7	%
Gloss		ASTM D 2457	85	-
Dart drop		ISO 7785/1	100	g
Elmendorf				
Tear Strength	MD/TD	ISO 8483/2	5/3	N
Puncture resistance, force		ASTM D 5748	50	N
Puncture resistance, energy		ASTM D 5748	1.3	J

- Data should not used for specification work

* Film properties are measured on a 40µm film sample produced on a 60mm W&H extruder with IBC cooling at BUR=12,5. MD = macine direction, TD = transverse direction

December, 2007

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22H594

Storage and Handling

22H594 should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation which results in odour generation and colour changes, and can have negative effects on the physical properties of the product.

Processing guidelines

22H594 is easily processed on conventional extruders.
Recommended melt temperature range is form 150°C to 180°C. Due to differences in screw an die head designs the optimum temperature adjustements are individual and should be sought for each production line.
With suitable equipment 22H594 can be drawn down to25 micron.

Regulatory Information

The product and uses described herein may require global product registrations and notifications for chemical inventory listings, or for use in food contact or medical devices. For further information, send an email to psnohreg@innovene.com. Unless specifically indicated, the products mentioned herein are not suitable for applications in the medical or pharmaceutical sector.

Health and Safety Information

The product described herein may require precautions in handling. The available product health and safety information for this material is contained in the Material Safety Data Sheet (MSDS) that may be obtained from the website www.ineospolyolefins.com. Before using any material, a customer is advised to consult the MSDS for the product under consideration for use.

Exclusion of Liability

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