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

1.1 Product identifier: PAVILAND RESINA AROMÁTICA

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

Relevant uses: Resins for making decorative coatings. For professional user only.

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

Grupo Puma SL
Parque Industrial Trévenez. Calle Conrado del Campo, nº 2 – 1ª Planta
29590 Campanillas - Málaga - Spain
Phone.: +34 901 11 69 12 -
Fax: +34 957 44 19 92
fds@grupopuma.com
www.grupopuma.com

1.4 Emergency telephone number: 901 11 69 12 (Horario de atención: 08:30 – 13:30 y de 16:00 – 19:00)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

CLP Regulation (EC) nº 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) nº 1272/2008.

Acute Tox. 4: Acute inhalation toxicity, Category 4, H332
Carc. 2: Carcinogenicity, Category 2, H351
Eye Irrit. 2: Eye irritation, Category 2, H319
Resp. Sens. 1: Sensitisation, respiratory, Category 1, H334
Skin Irrit. 2: Skin irritation, Category 2, H315
Skin Sens. 1: Sensitisation, skin, Category 1, H317
STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

2.2 Label elements:

CLP Regulation (EC) nº 1272/2008:

Danger

Hazard statements:

Harmful if inhaled
Suspected of causing cancer
Causes serious eye irritation
May cause allergy or asthma symptoms or breathing difficulties if inhaled
Causes skin irritation
May cause an allergic skin reaction
May cause respiratory irritation

Precautionary statements:

Do not breathe dust/fume/gas/mist/vapours/spray
Wear protective gloves/protective clothing/eye protection/face protection
IF ON SKIN: Wash with plenty of water
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF exposed or concerned: Get medical advice/attention
Get medical advice/attention if you feel unwell
Dispose of the contents/containers in accordance with the current legislation on waste treatment

Supplementary information:

Contains isocyanates. May produce an allergic reaction
Contains benzoyl chloride. May produce an allergic reaction

Substances that contribute to the classification

4,4´-methylenediphenyl diisocyanate; 4,4´-methylenediphenyl diisocyanate, isomers and homologues; 4,4´-Methylenediphenyl diisocyanate, oligomers

2.3 Other hazards:

- CONTINUED ON NEXT PAGE -

SECTION 2: HAZARDS IDENTIFICATION (continued)

Non-applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: Mixture of substances

Components:

In accordance with Annex II of Regulation (EC) nº1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification		Concentration
CAS: 101-68-8 EC: 202-966-0 Index: 615-005-00-9 REACH: 01-2119457014-47-XXXX	**4,4´-methylenediphenyl diisocyanate** ATP CLP00		**21 - <25 %**
	Regulation 1272/2008	Acute Tox. 4: H332; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 2: H373; STOT SE 3: H335 - Danger	
CAS: 9016-87-9 EC: Non-applicable Index: 615-005-00-9 REACH: Non-applicable	**4,4´-methylenediphenyl diisocyanate, isomers and homologues** ATP ATP01		**1 - <10 %**
	Regulation 1272/2008	Acute Tox. 4: H332; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 2: H373; STOT SE 3: H335 - Danger	
CAS: 25686-28-6 EC: 500-040-3 Index: Non-applicable REACH: 01-2119457013-49-XXXX	**4,4´-Methylenediphenyl diisocyanate, oligomers** Self-classified		**1 - <10 %**
	Regulation 1272/2008	Acute Tox. 4: H332; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 2: H373; STOT SE 3: H335 - Danger	
CAS: 872-50-4 EC: 212-828-1 Index: 606-021-00-7 REACH: 01-2119472430-46-XXXX	**N-methyl-2-pyrrolidone** ATP ATP01		**1 - <10 %**
	Regulation 1272/2008	Eye Irrit. 2: H319; Repr. 1B: H360D; Skin Irrit. 2: H315; STOT SE 3: H335 - Danger	
CAS: 98-88-4 EC: 202-710-8 Index: 607-012-00-0 REACH: 01-2119487138-29-XXXX	**benzoyl chloride** ATP ATP01		**<1 %**
	Regulation 1272/2008	Acute Tox. 4: H302+H312+H332; Skin Corr. 1B: H314; Skin Sens. 1: H317 - Danger	

To obtain more information on the risk of the substances consult sections 8, 11, 12, 15 and 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

4.2 Most important symptoms and effects, both acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed:

- CONTINUED ON NEXT PAGE -

SECTION 4: FIRST AID MEASURES (continued)

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Product is non-flammable under normal conditions of storage, manipulation and use. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Product is non-flammable under normal conditions of storage, manipulation and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:

- CONTINUED ON NEXT PAGE -

SECTION 7: HANDLING AND STORAGE (continued)

A.- Technical measures for storage

Minimum Temp.: 5 ºC

Maximum Temp.: 35 ºC

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the work environment

Identification	Environmental limits		
N-methyl-2-pyrrolidone	IOELV (8h)	10 ppm	40 mg/m³
CAS: 872-50-4	IOELV (STEL)	20 ppm	80 mg/m³
EC: 212-828-1	Year	2015	

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
4,4´-methylenediphenyl diisocyanate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 101-68-8	Dermal	50 mg/kg	Non-applicable	Non-applicable	Non-applicable
EC: 202-966-0	Inhalation	0,1 mg/m³	0,1 mg/m³	0,05 mg/m³	0,05 mg/m³
4,4´-Methylenediphenyl diisocyanate, oligomers	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 25686-28-6	Dermal	50 mg/kg	Non-applicable	Non-applicable	Non-applicable
EC: 500-040-3	Inhalation	0,1 mg/m³	0,1 mg/m³	0,05 mg/m³	0,05 mg/m³
N-methyl-2-pyrrolidone	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 872-50-4	Dermal	208 mg/kg	Non-applicable	19,8 mg/kg	Non-applicable
EC: 212-828-1	Inhalation	80 mg/m³	Non-applicable	40 mg/m³	Non-applicable

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
4,4´-methylenediphenyl diisocyanate	Oral	20 mg/kg	Non-applicable	Non-applicable	Non-applicable
CAS: 101-68-8	Dermal	25 mg/kg	Non-applicable	Non-applicable	Non-applicable
EC: 202-966-0	Inhalation	0,05 mg/m³	0,05 mg/m³	0,025 mg/m³	0,025 mg/m³
4,4´-Methylenediphenyl diisocyanate, oligomers	Oral	20 mg/kg	Non-applicable	Non-applicable	Non-applicable
CAS: 25686-28-6	Dermal	25 mg/kg	Non-applicable	Non-applicable	Non-applicable
EC: 500-040-3	Inhalation	0,05 mg/m³	0,05 mg/m³	0,025 mg/m³	0,025 mg/m³
N-methyl-2-pyrrolidone	Oral	26 mg/kg	Non-applicable	6,3 mg/kg	Non-applicable
CAS: 872-50-4	Dermal	125 mg/kg	Non-applicable	11,9 mg/kg	Non-applicable
EC: 212-828-1	Inhalation	80 mg/m³	Non-applicable	12,5 mg/m³	Non-applicable

PNEC:

Identification				
4,4´-methylenediphenyl diisocyanate	STP	1 mg/L	Fresh water	1 mg/L
CAS: 101-68-8	Soil	1 mg/kg	Marine water	0,1 mg/L
EC: 202-966-0	Intermittent	10 mg/L	Sediment (Fresh water)	Non-applicable
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable
4,4´-Methylenediphenyl diisocyanate, oligomers	STP	1 mg/L	Fresh water	1 mg/L
CAS: 25686-28-6	Soil	1 mg/kg	Marine water	0,1 mg/L
EC: 500-040-3	Intermittent	10 mg/L	Sediment (Fresh water)	Non-applicable
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification				
N-methyl-2-pyrrolidone	STP	10 mg/L	Fresh water	0,25 mg/L
CAS: 872-50-4	Soil	0,138 mg/kg	Marine water	0,025 mg/L
EC: 212-828-1	Intermittent	5 mg/L	Sediment (Fresh water)	1,42 mg/kg
	Oral	1,67 g/kg	Sediment (Marine water)	0,142 mg/kg

8.2 Exposure controls:

A.- General security and hygiene measures in the work place

As a preventative measure it is recommended to use basic Personal Protection Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,…) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.
All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	CE CAT III	EN 405:2001+A1:2009	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves	CE CAT III	EN 374-1:2003 EN 374-3:2003/AC:2006 EN 420:2003+A1:2009	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application

D.- Ocular and facial protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face mask	CE CAT II	EN 166:2001 EN 167:2001 EN 168:2001 EN ISO 4007:2012	Clean daily and disinfect periodically according to the manufacturer´s instructions. Use if there is a risk of splashing.

E.- Bodily protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks	CE CAT III	EN 13034:2005+A1:2009 EN 168:2001 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2001 EN ISO 6530:2005 EN 464:1994	For professional use only. Clean periodically according to the manufacturer´s instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk	CE CAT III	EN ISO 20345:2011 EN 13832-1:2006	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2002	 Eyewash stations	DIN 12 899 ISO 3864-1:2002

Environmental exposure controls:

- CONTINUED ON NEXT PAGE -

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 ºC:	Liquid
Appearance:	Not available
Color:	Yellowish
Odor:	Characteristic
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	200 ºC
Vapour pressure at 20 ºC:	0 Pa
Vapour pressure at 50 ºC:	Non-applicable *
Evaporation rate at 20 ºC:	Non-applicable *

Product description:

Density at 20 ºC:	1200 kg/m³
Relative density at 20 ºC:	Non-applicable *
Dynamic viscosity at 20 ºC:	Non-applicable *
Kinematic viscosity at 20 ºC:	Non-applicable *
Kinematic viscosity at 40 ºC:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 ºC:	Non-applicable *
Partition coefficient n-octanol/water 20 ºC:	Non-applicable *
Solubility in water at 20 ºC:	Non-applicable *
Solubility properties:	Insoluble
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *

Flammability:

Flash Point:	>200 ºC
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	600 ºC
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *

9.2 Other information:

Surface tension at 20 ºC:	Non-applicable *
Refraction index:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

- CONTINUED ON NEXT PAGE -

SECTION 10: STABILITY AND REACTIVITY (continued)

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

10.5 Incompatible materials:

Acids	Water	Combustive materials	Combustible materials	Others
Avoid strong acids	Not applicable	Precaution	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A.- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- Inhalation (acute effect):

- Acute toxicity : Exposure in high concentration can cause a breakdown in the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.
- Corrosivity/Irritability: Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, however it does contain substances classified as dangerous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Prolonged exposure can result in specific respiratory hypersensitivity.
- Cutaneous: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

F- Specific target organ toxicity (STOT) - single exposure:

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

G- Specific target organ toxicity (STOT)-repeated exposure:

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, however, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
4,4´-methylenediphenyl diisocyanate	LD50 oral	7616 mg/kg	Rat
CAS: 101-68-8	LD50 dermal	10000 mg/kg (ATEi)	Rabbit
EC: 202-966-0	LC50 inhalation	11 mg/L (4 h) (ATEi)	
N-methyl-2-pyrrolidone	LD50 oral	3598 mg/kg	Rat
CAS: 872-50-4	LD50 dermal	7000 mg/kg	Rat
EC: 212-828-1	LC50 inhalation	Non-applicable	
4,4´-methylenediphenyl diisocyanate, isomers and homologues	LD50 oral	Non-applicable	
CAS: 9016-87-9	LD50 dermal	Non-applicable	
EC: Non-applicable	LC50 inhalation	11 mg/L (4 h) (ATEi)	
4,4´-Methylenediphenyl diisocyanate, oligomers	LD50 oral	Non-applicable	
CAS: 25686-28-6	LD50 dermal	Non-applicable	
EC: 500-040-3	LC50 inhalation	11 mg/L (4 h) (ATEi)	
benzoyl chloride	LD50 oral	1900 mg/kg	Rat
CAS: 98-88-4	LD50 dermal	Non-applicable	
EC: 202-710-8	LC50 inhalation	Non-applicable	

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

Identification	Acute toxicity		Species	Genus
4,4´-methylenediphenyl diisocyanate	LC50	1000 mg/L (96 h)	Brachydanio rerio	Fish
CAS: 101-68-8	EC50	Non-applicable		
EC: 202-966-0	EC50	Non-applicable		
N-methyl-2-pyrrolidone	LC50	832 mg/L (96 h)	Lepomis macrochirus	Fish
CAS: 872-50-4	EC50	4897 mg/L (48 h)	Daphnia magna	Crustacean
EC: 212-828-1	EC50	500 mg/L (72 h)	Scenedesmus subspicatus	Algae
benzoyl chloride	LC50	34.1 mg/L (96 h)	Pimephales promelas	Fish
CAS: 98-88-4	EC50	Non-applicable		
EC: 202-710-8	EC50	Non-applicable		

12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
N-methyl-2-pyrrolidone	BOD5	1.09 g O2/g	Concentration	100 mg/L
CAS: 872-50-4	COD	1.6 g O2/g	Period	28 days
EC: 212-828-1	BOD5/COD	0.68	% Biodegradable	73 %

12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
4,4´-methylenediphenyl diisocyanate	BCF	150
CAS: 101-68-8	Pow Log	4.51
EC: 202-966-0	Potential	High

- CONTINUED ON NEXT PAGE -

SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Bioaccumulation potential	
N-methyl-2-pyrrolidone	BCF	0.23
CAS: 872-50-4	Pow Log	-0.46
EC: 212-828-1	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
4,4´-methylenediphenyl diisocyanate	Koc	Non-applicable	Henry	Non-applicable
CAS: 101-68-8	Conclusion	Non-applicable	Dry soil	Non-applicable
EC: 202-966-0	Surface tension	2,068E-2 N/m (283,45 ºC)	Moist soil	Non-applicable
N-methyl-2-pyrrolidone	Koc	Non-applicable	Henry	Non-applicable
CAS: 872-50-4	Conclusion	Non-applicable	Dry soil	Non-applicable
EC: 212-828-1	Surface tension	4,007E-2 N/m (25 ºC)	Moist soil	Non-applicable
benzoyl chloride	Koc	Non-applicable	Henry	Non-applicable
CAS: 98-88-4	Conclusion	Non-applicable	Dry soil	Non-applicable
EC: 202-710-8	Surface tension	3,872E-2 N/m (25 ºC)	Moist soil	Non-applicable

12.5 Results of PBT and vPvB assessment:

Non-applicable

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
08 01 11*	Waste paint and varnish containing organic solvents or other dangerous substances	Dangerous

Type of waste (Regulation (EU) No 1357/2014):

HP4 Irritant — skin irritation and eye damage, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP6 Acute Toxicity, HP13 Sensitising, HP7 Carcinogenic, HP10 Toxic for reproduction

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) nº1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

This product is not regulated for transport (ADR/RID,IMDG,IATA)

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): N-methyl-2-pyrrolidone

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Non-applicable

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SECTION 15: REGULATORY INFORMATION (continued)

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):

Contains more than 0.1 % of 4,4´-methylenediphenyl diisocyanate, isomers and homologues, 4,4´-methylenediphenyl diisocyanate by weight. This product may not be distributed in its present form for first-time sale to the general public after 27th December 2010 unless the packaging contains protective gloves meeting the provisions of European Council Directive 89/686/CEE.
Shall not be used in:
—ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
—tricks and jokes,
—games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) Nº 1907/2006 (Regulation (EC) Nº 2015/830)

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Non-applicable

Texts of the legislative phrases mentioned in section 2:

H315: Causes skin irritation
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317: May cause an allergic skin reaction
H351: Suspected of causing cancer
H335: May cause respiratory irritation
H332: Harmful if inhaled
H319: Causes serious eye irritation

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) nº 1272/2008:

Acute Tox. 4: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled
Acute Tox. 4: H332 - Harmful if inhaled
Carc. 2: H351 - Suspected of causing cancer
Eye Irrit. 2: H319 - Causes serious eye irritation
Repr. 1B: H360D - May damage the unborn child.
Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage
Skin Irrit. 2: H315 - Causes skin irritation
Skin Sens. 1: H317 - May cause an allergic skin reaction
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Inhalation)
STOT SE 3: H335 - May cause respiratory irritation

Classification procedure:

- CONTINUED ON NEXT PAGE -

SECTION 16: OTHER INFORMATION (continued)

Skin Irrit. 2: Calculation method
Resp. Sens. 1: Calculation method
Skin Sens. 1: Calculation method
Carc. 2: Calculation method
STOT SE 3: Calculation method
Acute Tox. 4: Calculation method
Eye Irrit. 2: Calculation method

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

http://esis.jrc.ec.europa.eu
http://echa.europa.eu
http://eur-lex.europa.eu

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol–water partition coefficient
Koc: Partition coefficient of organic carbon

- END OF SAFETY DATA SHEET -