



Material Safety Data Sheet

FAST:coat

Revision date: 01/2016

1. Material identification / Company identification

Trade name: **PU Primer**

Company: **LRS SYSTEMS Ltd**
F2 Enterprise Way, Vale Park, Evesham, Worcs. WR11 1GS
Tel: 01386 765 155

2. Hazards identification

CLASSIFICATION OF THE MIXTURE

In accordance with Directive 1999/45/EC:

Flammable.

Xn - Harmful by inhalation.

Xn - May cause sensitisation by inhalation and skin contact.

Xi - Irritating to eyes, respiratory system and skin.

LABEL ELEMENTS

Labelling in accordance with Directive 1999/45/EC:

Symbols:

Xn



Harmful

R Phrases:

R10 Flammable.

R20 Harmful by inhalation.

R42/43 May cause sensitisation by inhalation and skin contact.

R36/37/38 Irritating to eyes, respiratory system and skin.

S Phrases:

S23 Do not breathe gas/fumes/vapour/spray

S24 Avoid contact with skin.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37 Wear suitable gloves.

S40 To clean the floor and all objects contaminated by this material, use ... (With Rayston Solvent).

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S60 This material and its container must be disposed of as hazardous waste.





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Other Phrases:

Contains isocyanates. See the information provided by the manufacturer.
Restricted to professional uses: Attention - avoid exposure - ask for special instructions prior to use.

Contains:
Aromatic polyurethane polymer

OTHER HAZARDS

In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

3. Composition and information about the components

SUBSTANCES

Not Applicable.

MIXTURES

Substances posing a danger to health or the environment in accordance with the Hazardous Substances Directive 67/548/EEC or Regulation (EC) No. 1272/2008, assigned a Community exposure limit in the workplace, and classified as PBT/vPvB or included in the Candidate List:

Identifiers	Name	Concentrate	(*)Classification Regulation (EC) No 1272/2008	(*)Classification Directive 67/548/CEE
Index No: 601-023-00-4 CAS No: 100-41-4 EC No: 202-849-4 Registration No: 01-2119489370-35-XXXX	[1] ethylbenzene	0 - 25 %	Acute Tox. 4 *, H332 - Flam. Liq. 2, H225	F Xn R11 R20
Index No: 607-195-00-7 CAS No: 108-65-6 EC No: 203-603-9 Registration No: 01-2119475791-29-XXXX	[1] 2-methoxy-1-methylethyl acetate	2.5 - 10 %	Flam. Liq. 3, H226	R10
Index No: 601-022-00-9 CAS No: 1330-20-7 EC No: 215-535-7 Registration No: 01-2119488216-32-XXXX	[1] xylene (Mixture of isomers)	2.5 - 12.5 %	Acute Tox. 4 *, H312 - Acute Tox. 4 *, H332 - Flam. Liq. 3, H226 - Skin Irrit. 2, H315	Xn Xi R10 R20/21 R38
CAS No: 96328-90-4 EC No: 692-819-0	Aromatic polyurethane polymer	25 - 75 %	Resp. Sens. 1, H334 - Skin Sens. 1, H317	Xi Xn R36/37/38 R20 R42/43

(*)The complete text of the R and H phrases is given in section 16 of this Safety Data Sheet.

*, ***, See Regulation (EC) No. 1272/2008, Annex VI, section 1.2.

[1] Substance with a Community workplace exposure limit (see section 8.1).



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4. First aid measures

DESCRIPTION OF FIRST AID MEASURES

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

INHALATION

Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration. Do not administer anything orally. If unconscious, place them in a suitable position and seek medical assistance.

EYE CONTACT

If wearing contact lenses, remove them. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance.

SKIN CONTACT

Remove contaminated clothing. Wash skin vigorously with water and soap or a suitable skin cleaner. NEVER use solvents or thinners.

INGESTION

If accidentally ingested, seek immediate medical attention. Keep calm. NEVER induce vomiting.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Harmful Product, prolonged exposure due to inhalation may cause anaesthetic effects and the need for immediate medical assistance.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

5. Firefighting measures

Flammable product, the necessary prevention measures should be taken to avoid risks, in case of fire, the following measures are recommended:

EXTINGUISHING MEDIA

Recommended extinguishing methods.

Extinguisher powder or CO₂. In case of more serious fires, also alcohol-resistant foam and water spray. Do not use a direct stream of water to extinguish.

SPECIAL HAZARDS ARISING FROM THE MIXTURE

Special risks.

Fire can cause thick, black smoke. Because of thermal decomposition, dangerous products can form: carbon monoxide, carbon dioxide. Exposure to combustion or decomposition products can be harmful to your health.





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ADVICE FOR FIREFIGHTERS

Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways.

FIRE PROTECTION EQUIPMENT

Per the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and gloves.

6. Accidental release measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Eliminate possible ignition points and ventilate the area. Avoid breathing fumes. For exposure control and individual protection measures, see section 8.

ENVIRONMENTAL PRECAUTIONS

Prevent the contamination of drains, surface or subterranean waters, and the ground.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Pick up the spill with non-combustible absorbent materials (soil, sand, vermiculite, diatomite, etc.). Pour the product and the absorbent in an appropriate container. The contaminated area should be immediately cleaned with an appropriate decontaminator. Pour the decontaminator on the remains in an opened container and let it act various days until no further reaction is produced.

REFERENCE TO OTHER SECTIONS

For exposure control and individual protection measures, see section 8.
For later elimination of waste, follow the recommendations under section 13.

7. Handling and storage

PRECAUTIONS FOR SAFE HANDLING

The fumes are heavier than air and can spread across the ground. They can form explosive mixtures with air. Prevent the creation of flammable or explosive fume concentrations in the air; prevent fume concentrations above work exposure limits. The product must only be used in areas where all unprotected flames and other ignition points have been eliminated. Electrical equipment must be protected as per applicable standards.

The product can be electrostatically charged: always use earth grounds when transferring the product. Operators must use antistatic footwear and clothing, and floors must be conductors.

Keep the container tightly closed and isolated from heat sources, sparks, and fire. Do not use tools that can cause sparks. For personal protection, see section 8. Never use pressure to empty the containers. They are not pressure-resistant containers.

In the application area, smoking, eating, and drinking must be prohibited.

Follow legislation on occupational health and safety.

Keep the product in containers made of a material identical to the original.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store per local legislation. Observe indications on the label. Store the containers between 5 and 35° C, in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep far away from ignition points. Keep away from oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-





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authorised persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills.

Classification and threshold amount of storage in accordance with Annex I to Directive 2012/18/EU (SEVESO III):

Code	Description	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
P5b	FLAMMABLE LIQUIDS	50	200

SPECIFIC END USE(S)

8. Exposure controls / personal protection

CONTROL PARAMETERS

Work exposure limit for:

Name	CAS No.	Country	Limit value	ppm	Mg/m ³
ethylbenzene	100-41-4	European Union [1]	Eight hours	100 (skin)	442 (skin)
			Short term	200 (skin)	884 (skin)
		United Kingdom [2]	Eight hours	100	441
			Short term	125	552
2-methoxy-1-methylethyl acetate	108-65-6	European Union [1]	Eight hours	50 (skin)	275 (skin)
			Short term	100 (skin)	550 (skin)
		United Kingdom [2]	Eight hours	500	274
			Short term	100	548
xylene (Mixture of isomers)	1330-20-7	European Union [1]	Eight hours	50 (skin)	221 (skin)
			Short term	100 (skin)	442 (skin)
		United Kingdom [2]	Eight hours	500	220
			Short term	100	441

[1] According both Binding Occupational Exposure Limits (BOELVs) and Indicative Occupational Exposure Limits (IOELVs) adopted by Scientific Committee for Occupational Exposure Limits to Chemical Agents (SCOEL).

[2] According Limit Value (IOELV) list in 2nd Indicative Occupational Exposure adopted by Health and Safety Executive.

The product does NOT contain substances with Biological Limit Values.

Concentration levels DNEL/DMEL:

Name	DNEL/DMEL	Type	Value
ethylbenzene N. CAS: 100-41-4 N. CE: 202-849-4	DNEL (Workers)	Inhalation, Long-term, Systemic effects	77 (mg/m ³)
2-methoxy-1-methylethyl acetate N. CAS: 108-65-6 N. CE: 203-603-9	DNEL (Workers)	Inhalation, Long-term, Systemic effects	275 (mg/m ³)
	DNEL (General population)	Inhalation, Long-term, Systemic effects	33 (mg/m ³)
	DNEL (Workers)	Dermal, Long-term, Systemic effects	153,5 (mg/kg bw/day)





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	DNEL (General population)	Dermal, Long-term, Systemic effects	54,8 (mg/kg bw/day)
	DNEL (General population)	Oral, Long-term, Systemic effects	1,67 (mg/kg bw/day)
xylene (Mixture of isomers) N. CAS: 1330-20-7 N. CE: 215-535-7	DNEL (Workers)	Inhalation, Long-term, Systemic effects	77 (mg/m ³)

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

Concentration levels PNEC:

Name	Details	Value
2-methoxy-1-methylethyl acetate N. CAS: 108-65-6 N. CE: 203-603-9	aqua (freshwater)	0,635 (mg/L)
	aqua (marine water)	0,0635 (mg/L)
	aqua (intermittent releases)	6,35 (mg/L)
	PNEC STP	100 (mg/L)
	sediment (freshwater)	3,29 (mg/kg sediment dw)
	sediment (marine water)	0,329 (mg/kg sediment dw)
	soil	0,29 (mg/kg soil dw)

PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.

EXPOSURE CONTROLS

Measures of a technical nature:

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.




Concentration:	100%	
Uses:	Coating	
Breathing protection:		
PPE:	Filter mask for protection against gases and particles.	
Characteristics:	«CE» marking, category III. The mask must have a wide field of vision and an anatomically designed form to be sealed and watertight.	
CEN Standards:	EN 136, EN 140, EN 405	
Maintenance:	Should not be stored in places exposed to high temperatures and damp environments before use. Special attention should be paid to the state of the inhalation and exhalation valves in the face adaptor.	
Observations:	Read carefully the manufacturer's instructions regarding the equipment's use and maintenance. Attach the necessary filters to the equipment per the specific nature of the risk (Particles and aerosols: P1-P2-P3, Gases and apours: A-B-E-K-AX), changing them as advised by the manufacturer.	
Hand protection:		
PPE:	Protective gloves against chemicals.	
Characteristics:	«CE» marking, category III.	
CEN Standards:	EN 374-1, En 374-2, EN 374-3, EN 420	
Maintenance:	Keep in a dry place, away from any sources of heat, and avoid exposure to sunlight as much as possible. Do not make any changes to the gloves that may alter their resistance, or apply paints, solvents or adhesives.	
Observations:	Gloves should be of the appropriate size and fit the user's hand well, not being too loose or too tight. Always use with clean, dry hands.	
Material:	PVC (polyvinyl chloride) Breakthrough time > 480min. Material thickness – 0.35mm.	
Eye protection:		
PPE:	Protective goggles with built-in frame.	





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<p>Characteristics: «CE» marking, category II. Eye protector with built-in frame for protection against dust, smoke, fog and vapour.</p> <p>CEN Standards: EN 165, EN 166, EN 167, EN 168</p> <p>Maintenance: Visibility through lenses should be ideal. Therefore, these parts should be cleaned daily. Protectors should be disinfected periodically following the manufacturer's instructions.</p> <p>Observations: Some signs of wear and tear include: yellow colouring of the lenses, superficial scratching of the lenses, scraping etc.</p>	
<p>Skin protection:</p>	
<p>PPE: Anti-static protective clothing.</p> <p>Characteristics: «CE» marking, category II. Protective clothing should not be too tight or loose in order not to obstruct the user's movements.</p> <p>CEN Standards: EN 340, EN 1149-1, EN 1149-2, EN 1149-3, EN 1149-5</p> <p>Maintenance: To guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer.</p> <p>Observations: The protective clothing should offer a level of comfort in line with the level of protection provided in terms of the hazard against which it protects, bearing in mind environmental conditions, the user's level of activity and the expected time of use.</p>	
<p>Footwear:</p>	
<p>PPE: Anti-static safety footwear.</p> <p>Characteristics: «CE» marking, category II.</p> <p>CEN Standards: EN ISO 13287, EN ISO 20344, EN ISO 20346</p> <p>Maintenance: The footwear should be checked regularly</p> <p>Observations: The level of comfort during use and acceptability are factors that are assessed very differently depending on the user. Therefore, it is advisable to try on different footwear models and, if possible, different widths.</p>	

9. Physical and chemical properties

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid with characteristic odour
Colour:	Depending on pigmentation
Odour:	Solvent
Odour threshold:	N.A./N.A.
pH:	n.a.
Melting point:	n.d. °C
Boiling Point:	238 °C
Flash point:	45 °C
Evaporation rate:	nd
Inflammability (solid, gas):	flammable
Lower Explosive Limit:	n.d.
Upper Explosive Limit:	N.A./N.A.
Vapour pressure:	nd
Vapour density:	nd
Relative density:	1,3 g/cm ³
Solubility:	Organic solvents
Liposolubility:	nd
Hydrosolubility:	not soluble
Partition coefficient (n-octanol/water):	nd
Auto-ignition temperature:	N.A./N.A.
Decomposition temperature:	N.A./N.A.





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Viscosity: 5000-10000 cps 25°C
Explosive properties: non-explosive
Oxidizing properties: non-oxidant

N.A./N.A. = Not Available/Not Applicable due to the nature of the product.

OTHER INFORMATION

Volatile organic compound (VOC)

Product Subcategory: One-pack performance coatings, solvent-borne
Phase I* (from 01/01/2007): 600 g/l
Phase II* (from 01/01/2010): 500 g/l
(*) g/l ready to use

VOC content (p/p): 15 %
VOC content: 184 g/l
Pour point: n.d.
Blink: n.d.
Kinematic viscosity: nd

10. Stability and reactivity

REACTIVITY

If the storage conditions are satisfied, does not produce dangerous reactions.

CHEMICAL STABILITY

Stable under the recommended handling and storage conditions (see section 7).

POSSIBILITY OF HAZARDOUS REACTIONS

Flammable liquid and vapour.

CONDITIONS TO AVOID

Avoid the following conditions:

High temperature.

Static discharge.

Contact with incompatible materials.

Avoid temperatures near or above the flash point. Do not heat closed containers. Avoid direct sunlight and heat, as these may cause a risk of fire.

INCOMPATIBLE MATERIALS

Avoid the following materials:

Explosives materials.

Toxic materials.

Oxidizing materials.

HAZARDOUS DECOMPOSITION PRODUCTS

In case of fire, dangerous decomposition products can be generated, such as carbon monoxide and dioxide and nitrogen fumes and oxides.





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11. Toxicological information

INFORMATION ON TOXICOLOGICAL EFFECTS

Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

Exposure to concentrations of solvent fumes above the work exposure limit can have negative effects (for example, irritation of the mucous membranes and respiratory system, adverse effects on the kidneys, liver, and the central nervous system). Among the symptoms are headaches, vertigo, fatigue, muscular weakness, drowsiness, and in extreme cases, unconsciousness.

Splatters in the eyes can cause irritation and reversible damage.

Based on the properties of isocyanates and considering existing technical data on similar products, it appears that this product may cause irritation and / or acute awareness of the respiratory system, leading to an asthmatic condition, a wheezing and chest pressure. Therefore, sensitized individuals may show asthmatic symptoms when exposed to atmospheres containing concentrations below the level of exposure. Repeated exposure can lead to chronic respiratory diseases.

Toxicological information about the substances present in the composition.

Acute toxicity

Name	Test		Kind	
	Type			Value
xylene (Mixture of isomers) CAS No: 1330-20-7 EC No: 215-535-7	Oral	LD50	Rat	4300 (mg/kg bw)
	Dermal	LD50	Rabbit	> 1700 (mg/kg bw)
	Inhalation	LC50	Rat	21,7 (mg/l/4 h)

a) acute toxicity:

Not conclusive data for classification.

b) irritation:

Based on available data, the classification criteria are not met.

c) corrosivity:

Not conclusive data for classification.

d) sensitisation:

Product classified:

Respiratory sensitiser, Category 1: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitiser, Category 1: May cause an allergic skin reaction.

e) repeated dose toxicity:

Not conclusive data for classification.

f) carcinogenicity:

Not conclusive data for classification.

g) mutagenicity:

Not conclusive data for classification.

h) toxicity for reproduction:

Based on available data, the classification criteria are not met.

12. Ecological information





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TOXICITY



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Name	Ecotoxicity			
	Type	Test	Kind	Value
xylene (Mixture of isomers) CAS No: 1330-20-7 EC No: 215-535-7	Fish	LC50	Fish	15,7 (mg/l)
	Aquatic invertebrates	LC50	Crustacean	8,5 (mg/l)
	Aquatic plants			

PERSISTENCE AND DEGRADABILITY

No information is available about persistence and degradability of the product.

BIOACCUMULATIVE POTENTIAL

No information is available regarding the bioaccumulation of the substances present.

MOBILITY IN SOIL

No information is available about the mobility in soil.

The product must not be allowed to go into sewers or waterways.

Prevent penetration into the ground.

RESULTS OF PBT AND VPVB ASSESSMENT

No information is available about the results of PBT and vPvB assessment of the product.

OTHER ADVERSE EFFECTS

No information is available about other adverse effects for the environment.

13. Disposal considerations

WASTE TREATMENT METHODS

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated per current, local/national legislation.

Follow the provisions of Directive 2008/98/EC regarding waste management.

14. Transport information

Transport following ADR rules for road transport, RID rules for railway, ADN for inner waterways, IMDG for sea, and ICAO/IATA for air transport.

LAND

Transport by road:

ADR, Transport by rail: RID.

Transport documentation:

Consignment note and written instructions

SEA

Transport by ship:

IMDG.

Transport documentation:

Bill of lading

AIR

Transport by plane:

ICAO/IATA.





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Transport document:

Airway bill.





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UN NUMBER	UN No: UN1866
UN PROPER SHIPPING NAME	Description: UN 1866 RESIN SOLUTION, 3, PG III, (D/E)
TRANSPORT HAZARD CLASS(ES)	Class(es): 3
PACKING GROUP	Packing group: III
ENVIRONMENTAL HAZARDS	Marine pollutant: No

SPECIAL PRECAUTIONS FOR USER

Labels: 3



Hazard number: 30

ADR LQ: 5 L

Transport by ship, FEm – Emergency sheets (F – Fire, S - Spills): F-E,S-E
Proceed in accordance with point 6.

TRANSPORT IN BULK PER ANNEX II OF MARPOL 73/78 AND THE IBC CODE
The product is not transported in bulk.

15. Regulatory information

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE MIXTURE

The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

See annex I of the Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances and the Regulation (EC) No 689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals and its subsequent updates.

The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

Product classification per Annex I of Directive 2012/18/EU (SEVESO III): P5b

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.

The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

CHEMICAL SAFETY ASSESSMENT

There has been no evaluation a chemical safety assessment of the product.





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16. Other information

COMPLETE TEXT OF THE R PHRASES THAT APPEAR IN SECTION 3

R10	Flammable.
R1	Highly flammable.
R20	Harmful by inhalation.
R38	Irritating to skin.
R20/21	Harmful by inhalation and in contact with skin.
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitisation by inhalation and skin contact.

COMPLETE TEXT OF THE H PHRASES THAT APPEAR IN SECTION 3

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H360D	May damage the unborn child.

It is advisable to carry out basic training regarding health and safety at work to handle this product correctly.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

DISCLAIMER

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.