Revision nr. 9

Dated 01.06.2015

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Page n. 1/17

SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

# Safety data sheet

# SECTION 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product name

SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR,

79-02 ME

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

Intended use Pad printing ink.

#### 1.3. Details of the supplier of the safety data sheet

Name COMEC ITALIA SRL

Full address PIAZZALE DEL LAVORO 149

District and Country 21044 CAVARIA VA

ITALIA

Tel. 0331 219516 Fax 0331 216161

e-mail address of the competent person

responsible for the Safety Data Sheet info@comec-italia.it
Product distribution by EDGARDO BAGGINI

#### 1.4. Emergency telephone number

For urgent inquiries refer to

+39 0331 219516

#### **SECTION 2. Hazards identification.**

#### 2.1. Classification of the substance or mixture.

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

#### 2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments.

Hazard classification and indication:

 Flam. Liq. 3
 H226

 Asp. Tox. 1
 H304

 Eye Irrit. 2
 H319

 STOT SE 3
 H336

 Aquatic Chronic 3
 H412

#### 2.1.2. 67/548/EEC and 1999/45/EC Directives and following amendments and adjustments.

Danger Symbols:

Xn

R phrases:

10-52/53-65-67

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

#### 2.2. Label elements.

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 2/17

# SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

#### Hazard pictograms:







Signal words: Danger

#### Hazard statements:

**H226** Flammable liquid and vapour.

**H304** May be fatal if swallowed and enters airways.

H319 Causes serious eye irritation.

**H336** May cause drowsiness or dizziness.

**H412** Harmful to aquatic life with long lasting effects.

#### Precautionary statements:

P210 Keep away from heat / sparks / open flames / hot surfaces. No smoking.

P233 Keep container tightly closed.

**P264** Wash the hands thoroughly after handling.

P280 Wear protective gloves / protective clothing / eye protection / face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

**Contains:** Aromatic hydrocarbons, C9

2-ETHOXY-1-METHYLETHYL ACETATE

#### 2.3. Other hazards.

Information not available.

# **SECTION 3. Composition/information on ingredients.**

#### 3.1. Substances.

Information not relevant.

## 3.2. Mixtures.

## Contains:

Identification. Conc. %. Classification 67/548/EEC. Classification 1272/2008 (CLP).

2-ETHOXY-1-METHYLETHYL ACETATE

CAS. 54839-24-6 13,5 - 15 R10, R67 Flam. Liq. 3 H226, STOT SE 3 H336 EC. 259-370-9

INDEX. 603-177-00-8

Reg. no. 01-2119475116-39xxxx

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 3/17

# SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

ALUMINIUM POWDER (STABILIZED)			
CAS. 7429-90-5 EC. 231-072-3	13,5 - 15	F R11, Note T	Flam. Sol. 1 H228, Note T
INDEX. 013-002-00-1			
Reg. no. 01-2119529243-45			
CYCLOHEXANONE			
CAS. 108-94-1 EC. 203-631-1	9 - 10,5	R10, Xn R20	Flam. Liq. 3 H226, Acute Tox. 4 H332
INDEX. 606-010-00-7			
Reg. no. 01-2119453616-35-xxxx			
Aromatic hydrocarbons, C9			
CAS. 64742-95-6	8 - 9	R10, R66, R67, Xn R65, Xi R37, N R51/53, Note P	Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H335, STOT SE 3 H336, Aquatic Chronic 2 H411, EUH066, Note P
EC. 918-668-5			
INDEX. 649-356-00-4			
Reg. no. 01-2119486773-35-xxxx			
BUTYLGLYCOL ACETATE			
CAS. 112-07-2 EC. 203-933-3	6 - 7	Xn R20/21	Acute Tox. 4 H312, Acute Tox. 4 H332
INDEX. 607-038-00-2			
Reg. no. 01-2119475112-47xxxx			
2-METHOXY-1-METHYLETHYL ACETATE			
CAS. 108-65-6 EC. 203-603-9	5 - 6	R10	Flam. Liq. 3 H226
INDEX. 607-195-00-7			
Reg. no. 01-2119475791-29-xxxx			
HYDROCARBONS, C10-C13, n-alkanes, isoalkanes, CYCLIC, <2% AROMATIC CAS EC. 918-481-9	3 - 3,5	R66, Xn R65	Asp. Tox. 1 H304, EUH066
INDEX			
Reg. no. 01-2119457273-39-xxxx			
BUTANOL			
CAS. 71-36-3	2 - 2,5	R10, R67, Xn R22, Xi R37/38, Xi R41	Flam. Liq. 3 H226, Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, STOT SE 3 H336
EC. 200-751-6			

Note: Upper limit is not included into the range.

INDEX. 603-004-00-6 Reg. no. 01-2119484630-38

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet. T+ = Very Toxic(T+), T = Toxic(T), Xn = Toxic(T+), C = Tox

# **SECTION 4. First aid measures.**

# 4.1. Description of first aid measures.

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 4/17

# SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

For symptoms and effects caused by the contained substances, see chap. 11.

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

Information not available

# **SECTION 5. Firefighting measures.**

#### 5.1. Extinguishing media.

#### SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

#### 5.2. Special hazards arising from the substance or mixture.

#### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

#### 5.3. Advice for firefighters.

#### GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

# SECTION 6. Accidental release measures.

#### 6.1. Personal precautions, protective equipment and emergency procedures.

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

#### 6.2. Environmental precautions.

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

#### 6.3. Methods and material for containment and cleaning up.

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 5/17

# SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

#### 6.4. Reference to other sections.

Any information on personal protection and disposal is given in sections 8 and 13.

# **SECTION 7. Handling and storage.**

#### 7.1. Precautions for safe handling.

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

#### 7.2. Conditions for safe storage, including any incompatibilities.

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

#### 7.3. Specific end use(s).

Information not available.

# **SECTION 8. Exposure controls/personal protection.**

## 8.1. Control parameters.

Regulatory References:

United Kingdom EH40/2005 Workplace exposure limits. Containing the list of workplace exposure

limits for use with the Control of Substances Hazardous to Health Regulations (as

amended).

Éire Code of Practice Chemical Agent Regulations 2011.

OEL EU Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive

2000/39/EC.

TLV-ACGIH ACGIH 2012

## 2-ETHOXY-1-METHYLETHYL ACETATE

Predicted no-effect concentration - PNEC.		
Normal value for the food chain (secondary poisoning)	117	mg/kg
Normal value for the terrestrial compartment	1,34	mg/kg
Normal value in fresh water	1,3	mg/l
Normal value for water, intermittent release	1,3	mg/l
Normal value in marine water	0,13	mg/l
Normal value for fresh water sediment	6,4	mg/kg
Normal value for marine water sediment	0,64	mg/kg
Normal value of STP microorganisms	62,5	mg/kg

#### Health - Derived no-effect level - DNEL / DMEL

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 6/17

# SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

	Effects on				Effects on			
Doute of eveneure	consumers.	A custo aviatamia	Chronic local	Chronio	workers	A acuta	Chronio local	Chronio
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.			VND	13,1 mg/kg		oyotoniio		oyotonno
Inhalation.	VND	365 mg/m3	VND	181 mg/m3	VND	608 mg/m3	s VND	302 mg/m3
Skin.	VIVD	ooo mg/mo	VND	62 mg/kg	VIVD	000 1119/1110	VND	103 mg/kg
ALLINAINILINA DOM/DED (OT	4 DU 17 ED)							
ALUMINIUM POWDER (STA Threshold Limit Value.	ABILIZED)							
Type	Country	TWA/8h		STEL/15min				
**	•	ma/m3	nnm	ma/m3	nnm			
		mg/m3	ppm	mg/m3	ppm			
OEL	IRL	1						
TLV-ACGIH		1	0,9					
WEL	UK	4						
CYCLOHEXANONE								
Threshold Limit Value. Type	Country	TWA/8h		STEL/15min				
. )   ~	Country							
		mg/m3	ppm	mg/m3	ppm			
OEL	EU	40,8	10	81,6	20	SKIN		
OEL	IRL	40,8	10	81,6	20	SKIN		
TLV-ACGIH		80	20	201	50			
	1.112					OKINI		
WEL	UK	41	10	82	20	SKIN		
Predicted no-effect concentration	n - PNEC.							
Normal value for the terrestrial co	ompartment			0,0143			ı/Kg	
Normal value in fresh water				0,0329		mg		
Mormal value in marine water				U U330		mo	1/1	
Normal value in marine water Normal value for fresh water sed	liment			0,0329 0,0951		mg mg		
	level - DNEL / D	MEL				mg mg		
Normal value for fresh water sed	level - DNEL / D Effects on	MEL			Effects on			
Normal value for fresh water sed	level - DNEL / D	MEL  Acute systemic	Chronic local		Effects on workers Acute local			Chronic
Normal value for fresh water sed Health - Derived no-effect I Route of exposure	level - DNEL / D Effects on consumers.		Chronic local	0,0951	workers	mg	Chronic local	systemic
Normal value for fresh water sed  Health - Derived no-effect I  Route of exposure	level - DNEL / D Effects on consumers.		Chronic local	0,0951 Chronic	workers	mg Acute	y/I	
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation.	level - DNEL / D Effects on consumers.		Chronic local	0,0951 Chronic	workers	mg Acute	Chronic local	systemic
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation.	level - DNEL / D Effects on consumers.		Chronic local	0,0951 Chronic	workers	mg Acute	Chronic local	systemic 20 mg/m3
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.	Effects on consumers. Acute local		Chronic local	0,0951 Chronic	workers	mg Acute	Chronic local	systemic 20 mg/m3
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin. Aromatic hydrocarbons, C	Effects on consumers. Acute local		Chronic local	0,0951 Chronic	workers	mg Acute	Chronic local	systemic 20 mg/m3
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.	Effects on consumers. Acute local		Chronic local	0,0951 Chronic	workers	mg Acute	Chronic local	systemic 20 mg/m3
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value.	Effects on consumers. Acute local	Acute systemic		0,0951  Chronic systemic  STEL/15min	workers Acute local	mg Acute	Chronic local	systemic 20 mg/m3
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value. Type	Effects on consumers. Acute local	Acute systemic  TWA/8h mg/m3	ppm	O,0951  Chronic systemic  STEL/15min mg/m3	workers Acute local	mg Acute	Chronic local	systemic 20 mg/m3
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value.	Effects on consumers. Acute local	Acute systemic		0,0951  Chronic systemic  STEL/15min	workers Acute local	mg Acute	Chronic local	systemic 20 mg/m3
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value. Type	Effects on consumers. Acute local  Country	Acute systemic  TWA/8h mg/m3 100	ppm	O,0951  Chronic systemic  STEL/15min mg/m3	workers Acute local	mg Acute	Chronic local	systemic 20 mg/m3
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value. Type TLV-ACGIH	Pevel - DNEL / D Effects on consumers. Acute local  Country  Devel - DNEL / D Effects on	Acute systemic  TWA/8h mg/m3 100	ppm	O,0951  Chronic systemic  STEL/15min mg/m3	ppm 50  Effects on	mg Acute	Chronic local	systemic 20 mg/m3
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value. Type  TLV-ACGIH Health - Derived no-effect I	Effects on consumers. Acute local  Country	Acute systemic  TWA/8h mg/m3 100	ppm	O,0951  Chronic systemic  STEL/15min mg/m3	workers Acute local	Acute systemic	Chronic local	systemic 20 mg/m3
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value. Type  TLV-ACGIH Health - Derived no-effect I Route of exposure	Pevel - DNEL / D Effects on consumers. Acute local  Country  Devel - DNEL / D Effects on consumers.	Acute systemic  TWA/8h mg/m3 100	ppm 20 Chronic local	0,0951  Chronic systemic  STEL/15min mg/m3 250  Chronic systemic	ppm 50  Effects on workers	mg Acute	vI Chronic local 120 mg/m3 VND	systemic 20 mg/m3 20 mg/kg/d
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value. Type  TLV-ACGIH Health - Derived no-effect I	Pevel - DNEL / D Effects on consumers. Acute local  Country  Devel - DNEL / D Effects on consumers.	Acute systemic  TWA/8h mg/m3 100	ppm 20	0,0951  Chronic systemic  STEL/15min mg/m3 250  Chronic	ppm 50  Effects on workers	Acute systemic	vI Chronic local 120 mg/m3 VND	systemic 20 mg/m3 20 mg/kg/d Chronic
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value. Type  TLV-ACGIH Health - Derived no-effect I Route of exposure Oral.	Pevel - DNEL / D Effects on consumers. Acute local  Country  Devel - DNEL / D Effects on consumers.	Acute systemic  TWA/8h mg/m3 100	ppm 20 Chronic local	0,0951  Chronic systemic  STEL/15min mg/m3 250  Chronic systemic	ppm 50  Effects on workers	Acute systemic	vI Chronic local 120 mg/m3 VND	systemic 20 mg/m3 20 mg/kg/d Chronic systemic
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value. Type  TLV-ACGIH Health - Derived no-effect I Route of exposure	Pevel - DNEL / D Effects on consumers. Acute local  Country  Devel - DNEL / D Effects on consumers.	Acute systemic  TWA/8h mg/m3 100	ppm 20 Chronic local VND	Chronic systemic  STEL/15min mg/m3 250  Chronic systemic 11 mg/kg	ppm 50  Effects on workers	Acute systemic	Chronic local 120 mg/m3 VND  Chronic local	systemic 20 mg/m3 20 mg/kg/d Chronic systemic
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value. Type  TLV-ACGIH Health - Derived no-effect I Route of exposure Oral. Inhalation.	Pevel - DNEL / D Effects on consumers. Acute local  Country  Devel - DNEL / D Effects on consumers.	Acute systemic  TWA/8h mg/m3 100	ppm 20 Chronic local VND VND	Chronic systemic  STEL/15min mg/m3 250  Chronic systemic 11 mg/kg 32 mg/m3	ppm 50  Effects on workers	Acute systemic	Chronic local 120 mg/m3 VND  Chronic local	systemic 20 mg/m3 20 mg/kg/d  Chronic systemic
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value. Type  TLV-ACGIH  Health - Derived no-effect I Route of exposure  Oral. Inhalation. Skin.	Pevel - DNEL / D Effects on consumers. Acute local  Country  Devel - DNEL / D Effects on consumers. Acute local	Acute systemic  TWA/8h mg/m3 100	ppm 20 Chronic local VND VND	Chronic systemic  STEL/15min mg/m3 250  Chronic systemic 11 mg/kg 32 mg/m3	ppm 50  Effects on workers	Acute systemic	Chronic local 120 mg/m3 VND  Chronic local	systemic 20 mg/m3 20 mg/kg/d  Chronic systemic
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value. Type  TLV-ACGIH  Health - Derived no-effect I Route of exposure  Oral. Inhalation. Skin.  BUTYLGLYCOL ACETATE	Pevel - DNEL / D Effects on consumers. Acute local  Country  Devel - DNEL / D Effects on consumers. Acute local	Acute systemic  TWA/8h mg/m3 100	ppm 20 Chronic local VND VND	Chronic systemic  STEL/15min mg/m3 250  Chronic systemic 11 mg/kg 32 mg/m3	ppm 50  Effects on workers	Acute systemic	Chronic local 120 mg/m3 VND  Chronic local	systemic 20 mg/m3 20 mg/kg/d  Chronic systemic
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value. Type  TLV-ACGIH  Health - Derived no-effect I Route of exposure  Oral. Inhalation. Skin.  BUTYLGLYCOL ACETATE Threshold Limit Value.	Pevel - DNEL / D Effects on consumers. Acute local  Country  Devel - DNEL / D Effects on consumers. Acute local	Acute systemic  TWA/8h mg/m3 100  MEL  Acute systemic	ppm 20 Chronic local VND VND	Chronic systemic  STEL/15min mg/m3 250  Chronic systemic 11 mg/kg 32 mg/m3 11 mg/kg	ppm 50  Effects on workers	Acute systemic	Chronic local 120 mg/m3 VND  Chronic local	systemic 20 mg/m3 20 mg/kg/d  Chronic systemic  150 mg/m3
Normal value for fresh water sed Health - Derived no-effect I Route of exposure Inhalation. Skin.  Aromatic hydrocarbons, C Threshold Limit Value. Type  TLV-ACGIH  Health - Derived no-effect I Route of exposure  Oral. Inhalation. Skin.  BUTYLGLYCOL ACETATE	Pevel - DNEL / D Effects on consumers. Acute local  Country  Devel - DNEL / D Effects on consumers. Acute local	Acute systemic  TWA/8h mg/m3 100	ppm 20 Chronic local VND VND	Chronic systemic  STEL/15min mg/m3 250  Chronic systemic 11 mg/kg 32 mg/m3	ppm 50  Effects on workers	Acute systemic	Chronic local 120 mg/m3 VND  Chronic local	systemic 20 mg/m3 20 mg/kg/d  Chronic systemic  150 mg/m3

SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

Revision nr. 9

SKIN

Dated 01.06.2015

Printed on 01.06.2015

	,					Pa	ge n. 7/17	
OEL	EU	133	20	333	50	SKIN		
OEL	IRL	133	20	333	50	SKIN		
TLV-ACGIH		131	20					
WEL	UK	133	20	332	50	SKIN		
Predicted no-effect concentra	ation - PNEC.							
Normal value for the food cha Normal value for the terrestria Normal value in fresh water Normal value for water, intern Normal value in marine water Normal value for fresh water Normal value for marine water Normal value of STP microor	al compartment mittent release r sediment er sediment ganisms			0,06 0,06 0,304 0,56 0,0304 2,03 0,203 90		g/kç g/kç mg/ mg/ mg/ mg/ mg/ mg/	;           	
Health - Derived no-effe	ct level - DNEL / D  Effects on	MEL			Effects on			
Route of exposure	consumers. Acute local	Acute systemic	Chronic local	Chronic systemic	workers Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.	VND	18 mg/kg/d	VND	4,3 mg/kg/d		·		·
Inhalation. Skin.	166 mg/m3	499 mg/m3	VND VND	67 mg/m3 36 mg/kg/d	333 mg/m3 102 mg/kg/d	773 mg/m3 27 mg/kg/d	VND VND	133 mg/m3 102 mg/kg/d
2-METHOXY-1-METHYL	ETHYL ACETATE							
Threshold Limit Value. Type	Country	TWA/8h		STEL/15min				
		mg/m3	ppm	mg/m3	ppm			
OEL	EU	275	50	550	100	SKIN		

OEL

WEL

Normal value for the terrestrial compartment 0.29 mg/kg 0,635 Normal value in fresh water mg/l Normal value for water, intermittent release 6,35 mg/l Normal value in marine water 0,0635 mg/l Normal value for fresh water sediment 3,29 mg/kg Normal value for marine water sediment 0,329 mg/l Normal value of STP microorganisms 100 mg/l

50

50

275

274

## Health - Derived no-effect level - DNEL / DMEL

IRL

UK

Effects on Effects on consumers. workers Route of exposure Acute systemic Chronic Acute local Chronic local Chronic Acute local Chronic local Acute systemic systemic systemic Oral. VND 1,67 mg/kg Inhalation. VND 33 mg/m3 VND 272 mg/m3 VND VND Skin. 54,8 mg/kg 153,5 mg/kg

550

548

100

100

# HYDROCARBONS, C10-C13, n-alkanes, isoalkanes, CYCLIC, <2% AROMATIC

Threshold Limit Value.

 Type
 Country
 TWA/8h
 STEL/15min

 mg/m3
 ppm
 mg/m3
 ppm

 TLV-ACGIH
 1200
 184

## BUTANOL

Threshold Limit Value. Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH		61	20			

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 8/17

SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

WEL	UK			154	50	SKIN		
OEL	IRL		20			SKIN		
Predicted no-effect concent	ration - PNEC.							
Normal value for the terrestrial compartment Normal value in fresh water Normal value for water, intermittent release Normal value in marine water Normal value for fresh water sediment Normal value for marine water sediment Normal value of STP microorganisms				0,015 0,082 2,25 0,0082 0,178 0,0178 2476		mg/k mg/l mg/l mg/l mg/k mg/k	g	
Health - Derived no-eff  Route of exposure	ect level - DNEL / I Effects on consumers. Acute local	Acute systemic	Chronic local	Chronic	Effects on workers Acute local	Acute	Chronic local	Chronic
Oral.			VND	systemic 3125 mg/kg		systemic		systemic
Inhalation.			55 mg/m3	VND			310 mg/m3	VND

#### Legend:

(C) = CEILING; INHAL = Inhalable Fraction; RESP = Respirable Fraction; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

#### 8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

# HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

#### SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

#### EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

#### RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 9/17

# SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

ENVIRONMENTAL EXPOSURE CONTROLS.

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

# **SECTION 9. Physical and chemical properties.**

#### 9.1. Information on basic physical and chemical properties.

Appearance liauid various Colour Odour typical of solvent Odour threshold. Not available. Not available. pH. Melting point / freezing point. Not available. Initial boiling point. > 140 °C. Not available. Boiling range. Flash point. > 23 °C **Evaporation Rate** Not available. Flammability of solids and gases Not available. Lower inflammability limit. Not available. Upper inflammability limit. Not available. Lower explosive limit. Not available. Upper explosive limit. Not available. Vapour pressure. Not available.

Solubility soluble in water and in polar solvents

Not available.

Not available.

Partition coefficient: n-octanol/water
Auto-ignition temperature.
Decomposition temperature.
Viscosity
Not available.
Viscosity
Not available.
Explosive properties
Not available.
Oxidising properties
Not available.
Not available.

#### 9.2. Other information.

Information not available.

Vapour density

Relative density.

# SECTION 10. Stability and reactivity.

#### 10.1. Reactivity.

There are no particular risks of reaction with other substances in normal conditions of use.

1-METHOXY-2-PROPANOL ACETATE: stable but with the air it may slowly develop peroxides that explode with an increase in temperature. BUTANOL: attacks various types of plastic.

CYCLOHEXANONE: may condense under the effect of heat to form resinous compounds. Attacks various types of plastic.

## 10.2. Chemical stability.

The product is stable in normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions.

The vapours may also form explosive mixtures with the air.

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 10/17

# SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

1-METHOXY-2-PROPANOL ACETATE: may react violently with oxidising agents and strong acids and alkaline metals.

BUTANOL: reacts violently developing heat with: aluminium, strong oxidising agents, strong reducing agents, hydrochloric acid. Forms explosive mixtures with the air.

CYCLOHEXANONE: risk of explosion on contact with: hydrogen peroxide, nitric acid, heat, mineral acids. Can react violently with oxidising agents. Forms explosive mixtures with the air.

#### 10.4. Conditions to avoid.

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

1-METHOXY-2-PROPANOL ACETATE: store in an inert atmosphere, sheletered from moisture because it hydrolises easily.

BUTANOL: avoid exposure to sources of heat and naked flames.

CYCLOHEXANONE: avoid exposure to sources of heat and naked flames.

#### 10.5. Incompatible materials.

1-METHOXY-2-PROPANOL ACETATE: oxidising agents, strong acids and alkaline metals.

#### 10.6. Hazardous decomposition products.

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

# **SECTION 11. Toxicological information.**

#### 11.1. Information on toxicological effects.

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

The introduction of even small quantities of this liquid into the respiratory system in case of ingestion or vomit may cause bronchopneumonia and pulmonary edema.

Acute effects: stinging eyes. Symptoms may include: rubescence, edema, pain and lachrymation.

Vapour inhalation may moderately irritate the upper respiratory trait. Contact with skin may cause slight irritation.

Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

This product contains highly volatile substances, which may cause serious depression of the central nervous system (CNS) and have negative effects, such as drowsiness, dizziness, slow reflexes, narcosis.

1-METHOXY-2-PROPANOL ACETATE: the main way of entry is the skin, whereas the respiratory way is less important owing to the low vapour tension of the product. Concentrations above 100 ppm cause eye irritation, nose and oropharynx. At 1000 ppm disturbance in the equilibrium and severe eye irritation is observed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and ocular irritation on direct contact. No chronic effects have been reported in man.

HYDROCARBONS, C10-C13, n-alkanes, isoalkanes, CYCLIC, <2% AROMATIC

LD50 (Oral). > 5000 mg/kg bw Rat

LD50 (Dermal). > 2000 mg/kg bw Rat

LC50 (Inhalation). > 50000 mg/m3 8h Rat

ALUMINIUM POWDER (STABILIZED)

LC50 (Inhalation). > 5 mg/l Ratto / Rat (4h)

2-METHOXY-1-METHYLETHYL ACETATE

LD50 (Oral). > 5000 mg/kg Ratto / Rat

LD50 (Dermal). > 2000 mg/kg Ratto / Rat

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 11/17

# SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

LC50 (Inhalation). > 4345 ppm/6h Ratto / Rat

2-ETHOXY-1-METHYLETHYL ACETATE

LD50 (Oral). > 5000 mg/Kg Ratto / Rat

LD50 (Dermal). 13,42 ml/Kg Coniglio / Rabbit LC50 (Inhalation). 6,99 mg/l/4h Rat

#### BUTANOL

LD50 (Oral). 790 mg/kg Rat

LD50 (Dermal). 3400 mg/kg Rabbit

LC50 (Inhalation). 8000 ppm/4h Rat

#### CYCLOHEXANONE

LD50 (Oral). > 1535 mg/Kg Ratto / Rat

LD50 (Dermal). 948 mg/Kg Coniglio / Rabbit

LC50 (Inhalation). > 8000 mg/l Ratto / Rat

#### BUTYLGLYCOL ACETATE

LD50 (Oral). 2000 mg/Kg Ratto / Rat

LD50 (Dermal). 2000 mg/Kg Coniglio / Rabbit

Aromatic hydrocarbons, C9

LD50 (Oral). > 2000 mg/Kg

LD50 (Dermal). > 2000 mg/Kg

LC50 (Inhalation). > 5 mg/l

# **SECTION 12. Ecological information.**

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment. **12.1. Toxicity.** 

HYDROCARBONS, C10-C13, n-alkanes, isoalkanes, CYCLIC, <2% AROMATIC

LC50 - for Fish.

> 1000 mg/l/96h Oncorthyncus mykiss OECD 203

EC50 - for Crustacea.

> 1000 mg/l/48h Daphnia magna

#### 2-METHOXY-1-METHYLETHYL ACETATE

LC50 - for Fish.

134 mg/l/96h Pesce, Oncorhynchus mykiss OECD 203

EC50 - for Crustacea.

> 500 mg/l/48h Daphnia magna

EC50 - for Algae / Aquatic Plants.

> 1000 mg/l/72h Selenastrum capricornutum OECD 201

Chronic NOEC for Fish.

47,5 mg/l Oryzias latipes 14 gg OECD 204

Chronic NOEC for Crustacea.

100 mg/l Dapnia magna 21 gg OECD 202

#### 2-ETHOXY-1-METHYLETHYL ACETATE

LC50 - for Fish.

140 mg/l/48h Oncorhynchus mykiss (test 48h)

EC50 - for Crustacea.

110 mg/l/48h Daphnia magna

EC50 - for Algae / Aquatic Plants.

> 100 mg/l/72h Scenedesmus subspicatus

# BUTANOL

LC50 - for Fish.

> 100 mg/l/96h Pimephales promelas

EC50 - for Crustacea.

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 12/17

# SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

> 100 mg/l/48h Daphnia magna

CYCLOHEXANONE

EC50 - for Crustacea.

527 mg/l/48h Fish, Pimephales promelas (96h)

BUTYLGLYCOL ACETATE

LC50 - for Fish.

> 10 mg/l/96h Fish 10-100 mg/kg (48h)

EC50 - for Crustacea.

> 100 mg/l/48h Daphnia Magna (24h)

EC50 - for Algae / Aquatic Plants.

> 100 mg/l/72h Scenedesmus subspicatus

Aromatic hydrocarbons, C9

LC50 - for Fish.

> 1 mg/l/96h ALGHE: TOSSICO: 1< LC/EC/IC50 <= 10 mg/l

EC50 - for Crustacea.

> 10 mg/l/48h INVERTEBRATI ACQUATICI: TOSSICO: 1 < LC/EC/IC50 <= 10 mg/l

EC50 - for Algae / Aquatic Plants.

> 100 mg/l/72h PESCE: TOSSICO: 1 < LC/EC/IC50 <= 10 mg/l

## 12.2. Persistence and degradability.

Biodegrabilità aerobica ultima Facilmente biodegradabile 98 % - 19 d Metodo: OECD TG 301 Rapporti non pubblicati.

HYDROCARBONS, C10-C13, n-alkanes, isoalkanes, CYCLIC, <2% AROMATIC Rapidly biodegradable.

2-METHOXY-1-METHYLETHYL ACETATE

Solubility in water.

198000 mg/l

Rapidly biodegradable.

2-ETHOXY-1-METHYLETHYL ACETATE

Solubility in water.

6,96 g/l

Rapidly biodegradable.

BUTANOL

Rapidly biodegradable.

CYCLOHEXANONE

Rapidly biodegradable.

BUTYLGLYCOL ACETATE

Rapidly biodegradable.

Aromatic hydrocarbons, C9

Rapidly biodegradable.

12.3. Bioaccumulative potential.

Bioconcentration factor (BCF): 2.7

Bibliographic

Not bioaccumulative.

2-METHOXY-1-METHYLETHYL ACETATE

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 13/17

# SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

Partition coefficient: n-octanol/water. 1,2 mg/l

. .

BUTANOL

BCF.

12.4. Mobility in soil.

Information not available.

#### 12.5. Results of PBT and vPvB assessment.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects.

Information not available.

# **SECTION 13. Disposal considerations.**

#### 13.1. Waste treatment methods.

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Avoid littering. Do not contaminate soil, sewers and waterways.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

# **SECTION 14. Transport information.**

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations. These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

Road and rail tra	ansport:			
ADR/I	RID Class:	3	UN:	1210
Packi	ng Group:	III		
Label	:	3		
Nr K	omlor	20		

Nr. Kemler: 30
Limited Quantity. 5 L
Tunnel restriction code. (D/E)

Proper Shipping Name: PRINTING INK or PRINTING INK RELATED MATERIAL

Special Provision: 640E

Carriage by sea (shipping):

IMO Class: 3 UN: 1210

Packing Group:

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 14/17

# SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

 Label:
 3

 EMS:
 F-E, S-D

 Marine Pollutant.
 NO

Proper Shipping Name: PRINTING INK or PRINTING INK RELATED MATERIAL

Transport by air:

IÁTA: 3 UN: 1210

Packing Group: III Label: 3

Cargo:

Packaging instructions: 366 Maximum quantity: 220 L

Pass.:

Packaging instructions: 355 Maximum quantity: 60 L

Special Instructions: A3, A72

Proper Shipping Name: PRINTING INK or PRINTING INK RELATED MATERIAL

# **SECTION 15. Regulatory information.**

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

Seveso category. 6

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Product.

Point. 3 - 40

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisarion (Annex XIV REACH).

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 15/17

# SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

#### 15.2. Chemical safety assessment.

No chemical safety assessment has been processed for the mixture and the substances it contains.

## **SECTION 16. Other information.**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 3 Flammable liquid, category 3
Flam. Sol. 1 Flammable solid, category 1
Acute Tox. 4 Acute toxicity, category 4
Asp. Tox. 1 Aspiration hazard, category 1
Eye Dam. 1 Serious eye damage, category 1

Eye Irrit. 2 Eye irritation, category 2
Skin Irrit. 2 Skin irritation, category 2

STOT SE 3 Specific target organ toxicity - single exposure, category 3

Aquatic Chronic 2 Hazardous to the aquatic environment, chronic toxicity, category 2

Aquatic Chronic 3 Hazardous to the aquatic environment, chronic toxicity, category 3

H226 Flammable liquid and vapour.

H228 Flammable solid.H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H332 Harmful if inhaled.

H304 May be fatal if swallowed and enters airways.

H318 Causes serious eye damage. H319 Causes serious eye irritation.

H315 Causes skin irritation.

H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.H412 Harmful to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

R10 FLAMMABLE.

R11 HIGHLY FLAMMABLE.
R20 HARMFUL BY INHALATION.

R20/21 HARMFUL BY INHALATION AND IN CONTACT WITH SKIN.

R22 HARMFUL IF SWALLOWED.

R37 IRRITATING TO RESPIRATORY SYSTEM.

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 16/17

# SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

R37/38 IRRITATING TO RESPIRATORY SYSTEM AND SKIN.

R41 RISK OF SERIOUS DAMAGE TO EYES.

R51/53 TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE

EFFECTS IN THE AQUATIC ENVIRONMENT.

R52/53 HARMFUL TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE

EFFECTS IN THE AQUATIC ENVIRONMENT.

R65 HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED.

REPEATED EXPOSURE MAY CAUSE SKIN DRYNESS OR CRACKING. R66

R67 VAPOURS MAY CAUSE DROWSINESS AND DIZZINESS.

#### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- **OEL: Occupational Exposure Level**
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

#### GENERAL BIBLIOGRAPHY

- 1. Directive 1999/45/EC and following amendments
- 2. Directive 67/548/EEC and following amendments and adjustments
- 3. Regulation (EC) 1907/2006 (REACH) of the European Parliament
- 4. Regulation (EC) 1272/2008 (CLP) of the European Parliament
- 5. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
- 6. Regulation (EC) 453/2010 of the European Parliament
- 7. Regulation (EC) 286/2011 (II Atp. CLP) of the European Parliament 8. Regulation (EC) 618/2012 (III Atp. CLP) of the European Parliament
- 9. The Merck Index. 10th Edition
- 10. Handling Chemical Safety 11. Niosh Registry of Toxic Effects of Chemical Substances
- 12. INRS Fiche Toxicologique (toxicological sheet)
- 13. Patty Industrial Hygiene and Toxicology
- 14. N.I. Sax Dangerous properties of Industrial Materials-7, 1989 Edition
- 15. ECHA website

#### FOR PROFESSIONAL USE ONLY

This safety data sheet is prepared in accordance with the instructions provided on the relevant safety data sheets by our suppliers.

## Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

Revision nr. 9

Dated 01.06.2015

Printed on 01.06.2015

Page n. 17/17

# SERIE PLT9: 75, 76, 77, 78 (RE) (RE GLITTER) (ME) (B), 79-050, 79-050 HD, 79-01 BR, 79-02 ME

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses. Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review: The following sections were modified: 01/02/03/10/11/12/14/16.