according to Regulation (EC) No. 453/2010 Date of issue: 07/11/2017 Version: 1.0



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1.	Product identifier	
Product	form	: M ixtures
Product	name	: Niagara Magenta, CR1
1.2.	Relevant identified uses of the	substance or mixture and uses advised against
1.2.1.	Relevant identified uses	
Use of t	he substance/ m ixture	: Inkjet printing
1.2.2.	Uses advised against	
Restrict	ions on use	: No additional information available
1.3.	Details of the supplier of the sa	fety data sheet
Dublin 2 T +353	, Ltd. itzwilliam Lane 2 - Ireland 1 678 0420 <u>memjet.com</u> - <u>www.memjet.com</u>	
1.4.	Emergency telephone number	

For Hazardous Materials Incidents (spill, leak, fire, exposure, or accident) call: CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3887 Hours of Operation: 24/7

Country	Organisation/Company	Address	Emergency number
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital, Guy's & St Thomas' Hospital Trust	Dudley Road B18 7QH Birmingham	0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours)

SECTION 2: Hazards identification

Classification of the substance or mixture 2.1.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Serious eye damage/eye irritation, Category 2	H319
Sensitisation — Skin, Category 1	H317
Hazardous to the aquatic environment — Chronic Hazard, Category 3	H412

Full text of H statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)

Signal word (CLP) Hazardous ingredients Hazard statements (CLP)

Precautionary statements (CLP)

- GHS07 : Warning
- : Azo pyridine dye
- : H317 May cause an allergic skin reaction
- H319 Causes serious eye irritation H412 Harmful to aquatic life with long lasting effects
- : P261 Avoid breathing mist, spray
 - P264 Wash hands thoroughly after handling
 - P272 Contaminated work clothing should not be allowed out of the workplace
 - P273 Avoid release to the environment
- P280 Wear eye protection, protective gloves P302+P352 IF ON SKIN: Wash with plenty of water P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove
- contact lenses, if present and easy to do. Continue rinsing P333+P313 If skin irritation or rash occurs: Get medical advice/attention P337+P313 If eye irritation persists: Get medical advice/attention

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P362+P364 - Take off contaminated clothing and wash it before reuse P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Water	(CAS No) 7732-18-5 (EC no) 231-791-2	~75	Not classified
Glycerol	(CAS No) 56-81-5 (EC no) 200-289-5	3	Not classified
Ethoxylated acetylenic diols	(CAS No) 1606-85-5 (EC no) 216-526-0	3	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319
Azo Pyridine dye: 6-Benzothiazolesulfonic acid, 2-[4-cyano-3-(1,1-dimethylethyl)-5-[[4-methyl- 6-[(6-sulfo-2-benzothiazolyl)(2,4,6-trimethyl-3-sulfophenyl)amino]-2-[(2,4,6- trimethyl-3- sulfophenyl)amino]-3-pyridinyl]azo]-1H-pyrazol-1-yl]-, potassium sodium salt	(CAS No) not assigned (EC no) 445-480-6	4	Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
2,4,7,9-Tetramethyl-5-decyne-4,7-diol ethoxylate	(CAS No) 9014-85-1 (EC no) 500-022-5	0.8	Eye Dam. 1, H318 Aquatic Chronic 3, H412

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures		
First-aid measures after inhalation	: If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.	
First-aid measures after skin contact	: Gently wash with plenty of soap and water.	
First-aid measures after eye contact	: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
4.2. Most important symptoms and effect	ets, both acute and delayed	
Symptoms/injuries after skin contact	: May cause an allergic skin reaction.	
Symptoms/injuries after eye contact	Causes serious eye irritation.	
Symptoms/injuries after ingestion	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use.	
4.3. Indication of any immediate medica	l attention and special treatment needed	

All treatments should be based on observed signs and symptoms of distress in the patient.

SECTION 5: Firefighting measures

5.1.	Extinguishing media		
Suitable	extinguishing media	:	Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media		:	None known.
5.2.	Special hazards arising from	the subst	ance or mixture
Fire haza	ard	:	No particular fire or explosion hazard.

Fire hazard Explosion hazard

: Product is not explosive.

according to Regulation (EC) No. 453/2010

according	, to Regulation (EC/ No. 455/2010	
5.3.	Advice for firefighters	
Firefigl	nting instructions	: Exercise caution when fighting any chemical fire. Use extinguishing media appropriate for surrounding fire.
Protec	tion during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Wear fire/flame resistant/retardant clothing. Wear a self-contained breathing apparatus. EN469.
SECT	TION 6: Accidental release me	sures
6.1.	Personal precautions, protective e	uipment and emergency procedures
6.1.1.	For non-emergency personnel	
Protec	tive equipment	: Avoid contact with skin and eyes.
Emerg	ency procedures	: Take up small spills with dry chemical absorbent.
6.1.2.	For emergency responders	
Protec	tive equipment	: Avoid all eye and skin contact and do not breathe vapour and mist.
Emerg	ency procedures	: Take up small spills with dry chemical absorbent.
6.2.	Environmental precautions	
Do not	discharge into drains or the environment	
6.3.	Methods and material for contain	ent and cleaning up
Metho	ds for cleaning up	: Take up liquid spill into absorbent material.
6.4.	Reference to other sections	
Sectio	n 7: safe handling.	
SECT	TION 7: Handling and storage	
7.1.	Precautions for safe handling	
Hygier	e measures	: Always wash your hands immediately after handling this product, and once again before leaving the workplace.
7.2.	Conditions for safe storage, inclu-	ng any incompatibilities
Storag	e conditions	: Keep only in the original container in a cool well ventilated place.
Incom	patible products	: None known.
7.3.	Specific end use(s)	
Ink.		
~ ~ ~ ~		

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Glycerol (56-81-5)			
Belgium	Limit value (mg/m ³)	10 mg/m ³	
Belgium	Remark (BE)	(brouillard)	
Czech Republic	Expoziční limity (PEL) (mg/m ³)	10 mg/m ³	
Czech Republic	Expoziční limity (PEL) (ppm)	2.44 ppm	
Czech Republic	Expoziční limity (NPK-P) (mg/m³)	15 mg/m ³	
Czech Republic	Expoziční limity (NPK-P) (ppm)	3.66 ppm	
Finland	HTP-arvo (8h) (mg/m ³)	20 mg/m ³	
France	VME (mg/m ³)	10 mg/m ³	
France	Note (FR)	(aérosols de)	
Ireland	OEL (8 hours ref) (mg/m ³)	10 mg/m ³	
Poland	NDS (mg/m ³)	10 mg/m ³	
Slovakia	NPHV (priemerná) (mg/m ³)	10 mg/m ³	
Spain	VLA-ED (mg/m ³)	10 mg/m ³	
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³	
Switzerland	VME (mg/m ³)	50 mg/m ³	
Switzerland	VLE (mg/m ³)	100 mg/m ³	
Switzerland	Remark (CH)	(inhalable aerosol)	
Canada (Quebec)	VEMP (mg/m ³)	10 mg/m ³	
USA - ACGIH	Local name	Glycerin mist	
USA - ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³	
USA - ACGIH	Remark (ACGIH)	URT irr	

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Glycerol (56-81-5)		
USA - OSHA	OSHA PEL(TWA)(mg/m³)	15 mg/m³ (total) 5 mg/m³ (respirable fraction)

8.2. Exposure controls

Appropriate engineering controls:

Avoid creating mist or spray. Avoid splashing. Either local exhaust or general room ventilation is usually required.

Hand protection:

Wear suitable gloves resistant to chemical penetration. Butyl rubber gloves. nitrile rubber gloves. EN374

Eye protection:

In case of splashing or aerosol production: protective goggles. EN166

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and	l chemical properties
Physical state	: Liquid
Appearance	: Magenta liquid.
Colour	: Magenta.
Odour	: Characteristic.
Odour threshold	: No data available
рН	: 7.1
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: >1
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Under normal conditions of storage and use, hazardous reactions will not occur.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

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10.6. Hazardous decomposition products

No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

: Not classified (Based on available data, the classification criteria are not met)

Glycerol (56-81-5)	
LD50 oral rat	5570 mg/kg
Ethoxylated acetylenic diols (1606-85-5)	
LD50 oral rat	1230 mg/kg (Based on similar product)
2,4,7,9-Tetramethyl-5-decyne-4,7-diol ethox	ylate (9014-85-1)
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 2 mg/l/4h
Water (7732-18-5)	
LD50 oral rat	> 5000 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 6 mg/l/4h
LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 6 mg/l/4h
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
2,4,7,9-Tetramethyl-5-decyne-4,7-diol ethox	ylate (9014-85-1)
NOAEL (subacute, oral, animal/male, 28 days) 200 mg/kg bodyweight

NOAEL (subacute, oral, animal/male, 28 days)	200 mg/kg bodyweight
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Potential adverse human health effects and symptoms	: Causes serious eye irritation. May cause an allergic skin reaction.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: May cause long lasting harmful effects to aquatic life.
Glycerol (56-81-5)	
LC50 fish 1	68 - 72 mg/l
2,4,7,9-Tetramethyl-5-decyne-4,7-diol ethoxylate (9014-85-1)	
LC50 fish 1	52.5 mg/l juvenile S. maximus
EC50 Daphnia 1	166 mg/l
ErC50 (algae)	15 mg/l
NOEC chronic algae	1 mg /l

12.2. Persistence and degradability

Niagara Magenta		
Persistence and degradability	Not established.	
Glycerol (56-81-5)		
Persistence and degradability Readily biodegradable.		
2,4,7,9-Tetramethyl-5-decyne-4,7-diol ethoxylate (9014-85-1)		
Persistence and degradability	Not readily biodegradable.	
12.3. Bioaccumulative potential		
2,4,7,9-Tetramethyl-5-decyne-4,7-diol ethoxylate (9014-85-1)		
Bioconcentration factor (BCF REACH) < 24		
Bioaccumulative potential Not expected to bioaccumulate.		

12.4. Mobility in soil	
No additional information available	
12.5. Results of PBT and vPvB asse	ssment
Component	
Glycerol (56-81-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
	This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
12.6. Other adverse effects	
Additional information	: Do not discharge into drains or the environment
SECTION 13: Disposal consideration	ations
13.1. Waste treatment methods	
Waste treatment methods	: Do not dispose in household garbage. Dispose in a safe manner in accordance with local/national regulations.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.
SECTION 14: Transport information	
In accordance with ADR / RID / IMDG / IAT	FA / ADN
14.1. UN number	
UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable
14.2. UN proper shipping name	
Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable
14.3. Transport hazard class(es)	
ADR	
Transport hazard class(es) (ADR)	: Not applicable
IMDG	
Transport hazard class(es) (I MDG)	: Not applicable
IATA	
Transport hazard class(es) (IATA)	: Not applicable
ADN	
Transport hazard class(es) (ADN)	: Not applicable
RID	
Transport hazard class(es) (RID)	: Not applicable
14.4. Packing group	
Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable
14.5. Environmental hazards	
Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

- Overland transport
- Not applicable

according to Regulation (EC) No. 453/2010

- Transport by sea Not applicable

- Air transport Not applicable

- Inland waterway transport Not applicable

- Rail transport Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions Contains no substance on the REACH candidate list Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany	
VwVwS Annex reference	: Water hazard class (WGK) 3, severe hazard to waters (Classification according to VwVwS, Annex 4)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	: Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)
Netherlands	
SZW-lijst van kankerverwekkende stoffen	: None of the components are listed
SZW-lijst van mutagene stoffen	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: None of the components are listed
Denmark	
Recommendations Danish Regulation	: Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

ACGIH	American Conference of Government Industrial Hygienists
ATE	Acute Toxicity Estimate
CAS	(Chemical Abstracts Service) number
CLP	Classification, Labelling, Packaging.
EC50	Environmental Concentration associated with a response by 50% of the test population.
GHS	Globally Harmonized System (of Classification and Labeling of Chemicals).
LD50	Lethal Dose for 50% of the test population
NOAEL	No Observable Adverse Effect Level
TWA	Time Weighted Average

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Data sources	: ACGIH (American Conference of Government Industrial Hygienists).
	European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <u>http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database</u> .
	National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th edition.
	Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.
	Manufacturer Information.
	US National Library of Medicine National Institutes of Health Haz-Map. Accessed at http://hazmap.nlm.nih.gov
Full text of H- and EUH-state	ments:
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Sensitisation — Skin, Category 1
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H400	Very toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
Classification and procedure	used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:
Eye Irrit. 2	H319 Calculation method
Skin Sens. 1	H317 Calculation method
Aquatic Chronic 3	H412 Calculation method

SDS EU (REACH Annex II)

SDS Prepared by: The Redstone Group, LLC 6077 Frantz Rd. Suite 206 Dublin, OH USA 43017 T 614-923-7472 www.redstonegrp.com

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product