MATERIAL SAFETY DATA SHEET

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

1.1. Product identifier.

Product name — Product name Black CTS (UV Blocking Aqueous Dye Ink) (High Temperature)

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

Intended Use — **Dye based ink for CTS application.**

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

Name: **S. Roque – Máquinas e Tecnologia Laser, S.A.**

Full Address: **Rua das Ribes 400, Oliveira S. Mateus**
4765-774 Oliveira S. Mateus
Vila Nova de Famalicão
Portugal

Email: **geral@roqdigital.com**

Telephone: **+351 252980500**

SECTION 2. Hazards identification.

2.1. Classification of the substance or mixture

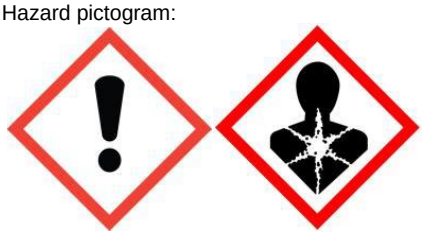
Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification	Category	Exposure route
Skin Sens.	1	-
Eye Irrit.	2	-
STOT Rep. Exp.	2	Oral
Acute Tox.	4	-

Other adverse physico-chemical, human health and environmental effects
None

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)
Hazard pictogram:



Warning

Hazard statements
H302: Harmful if swallowed
H317: May cause an allergic skin reaction
H319: Causes serious eye irritation
H373: May cause damage to organs through prolonged or repeated exposure

EU208:

May produce an allergic reaction
Contains pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2- sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-hydroxynaphthalene-2,7-disulphonate.
Contains trisodium 5-[[5-[[4-chloro-6-[(3-sulphonatophenyl)amino]-1,3,5-triazin-2-yl]amino]-2-sulphonatophenyl]azo]-1-ethyl- 1,2-dihydro-6-hydroxy-4-methyl-2-oxopyridine-3-methanesulphonate..

Precautionary statements:
Prevention: P261: Avoid breathing mist/vapors/spray
P280: Wear protective gloves/ protective clothing/ protective eye and face protection

Response: P302+P350: IF ON SKIN: Wash with plenty of soap and water
P333+P313: If skin irritation or rash occurs: Get medical advice /attention
P305+P351+P338 IF IN EYES: Rinse immediately with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice / attention.

2.3. Other hazards
No reliable data available.

SECTION 3. Composition/information on ingredients.

3.1. Substances
Not applicable

3.2. Mixtures

Name	CAS N.º	EC N.º	Index N.º	REACH Registration N.º	% wt/wt	Classification according to (EC) No1272/2008 (CLP)
Ethylene Glycol	107-21-1	203-473-3	603-027-00-1	01-2119456816-28-0128	<20%	Acute Tox4; H302 STOT Rep. Exp. 2 H373
pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-hydroxynaphthalene-2,7-disulphonate	68259-02-9	269-505-3	_____		<15%	Eye Irrit. 2B H319 Skin Sens. 1B; H317
trisodium 5-[[5-[[4-chloro-6-[(3-sulphonatophenyl)amino]-1,3,5-triazin-2-yl]amino]-2-sulphonatophenyl]azo]-1-ethyl-1,2-dihydro-6-hydroxy-4-methyl-2-oxopyridine-3-methanesulphonate	84045-63-6	281-865-3	_____		<4%	Not classified

Note: Undisclosed components are Not classified or Water.

SECTION 4. First aid measures

4.1. Description of first aid measures ^^
General Advise: Remove contaminated clothing.
If Inhaled: Keep patient calm, remove to fresh air, seek medical attention.
On Skin contact: Wash thoroughly with soap and water
P302+ P352: Wash with plenty of soap and water
On contact with eyes: Remove contact lenses, if present and easy to do. Wash affected eyes for at least 15 minutes under running water with eyelids held open. If eye irritation persists: Get medical advice / attention.
On ingestion: immediately rinse mouth and then drink 200-300 ml of water, seek medical attention
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

4.2. Most important symptoms and effects, both acute and delayed ^^
Inhaled:

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion:
Ingestion is thought to produce harmful effects (as classified under EC Directives), the material causes damage to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident.
Skin Contact:
Since material may cause sensitization to skin, good hygiene practice requires that exposure be kept to a minim um and that suitable gloves be used in an occupational setting.
Eye:
The material is thought to cause serious eye irritation.
Chronic:
May cause damage to organs through prolonged or repeated exposure: Affected organs: kidney; Route of exposure: Oral

4.3. Indication of any immediate medical attention and special treatment needed
P314: Get medical attention if you feel unwell

SECTION 5. Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media: water spray, dry powder, alcohol-resistant foam, carbon dioxide

5.2. Special hazards arising from the substance or mixture
Product is non-flammable water based solution. Hazardous combustion products (gases/vapours) produced in fire can include carbon monoxide, carbon dioxide, nitrogen oxides, sulphur oxides, chlorides and Smoke

5.3. Advice for firefighters
Alert Fire Brigade and tell them location and nature of hazard.
Wear breathing apparatus plus protective gloves.
Prevent, by any means available, spillage from entering drains or water courses.
Use water delivered as a fine spray to control fire and cool adjacent area.
DO NOT approach containers suspected to be hot.
Cool fire exposed containers with water spray from a protected location.
If safe to do so, remove containers from path of fire.
Further information: Contaminated extinguishing water must be disposed of in accordance with official regulations.

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
P281: Use personal protective equipment as required.

6.1.1. For non-emergency personnel
Avoid breathing mist/vapors/spray. Wear protective gloves/ protective clothing/ protective eye and face protection. Wash hands/ area of contact thoroughly after handling. Do not eat, drink, or smoke when using this product. Obtain special instructions before use. Use personal protective equipment as required.

6.1.2. For emergency responders
Wear breathing apparatus plus protective gloves and protective clothing. Remove ignition sources and provision of sufficient ventilation, evacuate the danger area and consult experts.

6.2. Environmental precautions
Avoid release to the environment. Dispose according to local or international regulations.
Do not empty into drains

6.3. Methods and material for containment and cleaning up
P264: Wash hands/ area of contact thoroughly after handling.
Methods for cleaning up or taking up: For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Dispose of absorbed material in accordance with regulations. For large amounts: Pump off product. Correctly dispose of recovered product immediately.

6.4. Reference to other sections
See Section 8 & Section 13 of this MSDS.

SECTION 7. Handling and storage

7.1. Precautions for safe handling
Do not handle until all safety precautions have been read and understood. Wear protective gloves/ protective clothing/ protective eye and face protection. Wash hands/ area of contact thoroughly after handling. Avoid breathing mist/vapors/spray.
P270: Do not eat, drink, or smoke when using this product.

P273: Avoid release to the environment.
Handling: Protection against fire and explosion, Electrical devices must meet the specified temperature class.

7.2. Conditions for safe storage, including any incompatibilities ^^
Suitable materials for containers: High density polyethylene (HDPE), High-Purity Polymer, stainless steel
Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.
Protect from air. Protect from atmosphere humidity, Protect contents from the effects of light
Note: For the best performance of the inks for application it is advisable to store and transport between 18 deg C to 28 deg C
Check all containers are clearly labelled and free from leaks. Keep container tightly closed in the ventilated place. Store in dry place. Keep away from heat and direct sunlight.
Storage duration: 12 months from the date of manufacturing
P405: Store locked up

7.3. Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Substance	Form	TWA	STEL	Reference
Ethylene Glycol	Particulate	10 mg/m³		EH40/2005 WELs (United Kingdom (UK), 8/2007). Absorbed through skin
	Vapour	52 mg/m³	104 mg/m³	Same
	Vapour	20ppm	40ppm	Same /ACGIH /OSHA

Ethylene Glycol
Derived effect levels
Long term exposure

DNEL	35 mg/m³	Workers	skin irritation/corrosion
DNEL	106 mg/kg bw/day	Workers	repeated dose toxicity
DNEL	7 mg/m³	General Population	skin irritation/corrosion
DNEL	53 mg/kg bw/day	General Population	repeated dose toxicity

Predicted effect concentrations

PNEC aqua (freshwater)	10 mg/L	Assessment Factor
PNEC aqua (marine water)	1 mg/L	Assessment Factor
PNEC aqua (intermitente releases)	10 mg/L	Assessment Factor
PNEC STP	199.5 mg/L	Assessment Factor
PNEC Sediment (freshwater)	37 mg/kg sediment dw	partition coefficient
PNEC Sediment (marine water)	3,7 mg/kg sediment dw	partition coefficient
PNEC soil	1,53 mg/kg soil dw	partition coefficient

Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-hydroxynaphthalene-2,7-disulphonate
Derived effect levels
Long term exposure

DNEL	0,6 mg/m³	Workers	repeated dose toxicity	Oral
DNEL	4,2 mg/kg bw/day	Workers	repeated dose toxicity	Oral
DNEL	0,145 mg/m³	General Population	repeated dose toxicity	Oral
DNEL	2,1 mg/kg bw/day	General Population	repeated dose toxicity	Oral
DNEL	0,1 mg/kg bw/day	General Population	repeated dose toxicity	Oral

Predicted effect concentrations

PNEC aqua (freshwater)	0,1 mg/L	Assessment Factor
PNEC aqua (marine water)	0,01 mg/L	Assessment Factor
PNEC aqua (intermitente releases)	1 mg/L	Assessment Factor
PNEC STP	3,2 mg/L	Assessment Factor
PNEC Sediment (freshwater)	0,676 mg/kg sediment dw	partition coefficient
PNEC Sediment (marine water)	0,0676 mg/kg sediment dw	partition coefficient
PNEC soil	0,0765 mg/kg solo dw	partition coefficient

8.2. Exposure controls
Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. W ell-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.
Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

General Personal Protection: Safety goggles or face shield, chemical resistant gloves, protective clothing and apparatus.
Eye/ Face Protection: Wear safety glasses or full face shield if splashes are likely to occur. Approved to EU Standard EN166.
Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respirator with combination filter for vapour/particulate (EN 14387). The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.

Hand Protection: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly.

Application of a non-perfumed moisturizer is recommended.

Body protection: Wear suitable protective clothing. Protective shoes or boots. Long sleeved clothing.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	**Liquid**
Colour	**Black**
Odour	**Mild Sweet**
pH	**7 – 9**
Freezing point	**Less than 0 deg C**
Boiling point	**More than 100 0C**
Flash point:	
Evaporation rate:	**Slower than ether**
Flammability (solid, gas):	**Not relevant as this product is liquid**
Lower explosion limit	**No data available**
Upper explosion limit	**No data available**
Vapour pressure:	**No data available**
Vapour density	**No data available**
Density g/cm3:	**1.15**
Water Solubility(ies):	**Completely miscible**
Partition coefficient: n-octanol/water:	**No data available**
Auto-ignition temperature:	**No data available**
Viscosity:	**3-12cPs**
Explosive properties:	**Not explosive**
Oxidising properties:	**Not oxidising**

9.2 Other information

Miscibility:	**No data available**
Fat Solubility:	**No data available**
Conductivity:	**No data available**
redox potential:	**No data available**
radical formation potential	**No data available**
photocatalytic properties	**No data available**

SECTION 10. Stability and reactivity

10.1. Reactivity
Stable under normal storage conditions. May react with strong oxidizing agents and incompatible materials.

10.2. Chemical stability

Product is considered stable during storage and transportation under normal condition.

10.3. Possibility of hazardous reactions
Stable under normal conditions. Hazardous reactions may occur if contact with incompatible material.

10.4. Conditions to avoid
Heat and direct sunlight, high temperature, ignition sources (sparks, flames, static), incompatible materials.

10.5. Incompatible Materials
Strong oxidisers & Strong Bases.

10.6. Hazardous decomposition products
Product is non-flammable water based solution. Hazardous combustion products (gases/vapours) produced in fire can include carbon monoxide, carbon dioxide, nitrogen oxides, sulphur oxides, chlorides and Smoke

SECTION 11. Toxicological information

11.1. Information on toxicological effects

(a) Acute Oral Toxicity
Data available for the mixture.
LD 50>2000 mg/kg , mice, Test method: OECD 203, Aeration.
Conclusion: No toxic symptoms were observed & none of the tested mice died during 96Hrs after the dose.

Component wise data
1. Ethylene glycol
LD50= 7712 mg/kg bw - 7d - Rat
Clinical signs
Depression, narcosis.
Gross pathology
Animals that died: kidney damage

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-Hydroxynapthalane-2,7-disulphonate (EC number 269-505-3)
LD50 > 2000 mg/kg bw - 15d - Rat

(b) Acute Dermal Toxicity
No Data available for the mixture.

Component wise data
1. Ethylene glycol
LD50 > 3500 mg/kg bw - Mouse

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-Hydroxynapthalane-2,7-disulphonate (EC number 269-505-3)
No data available

(c) Acute Inhalation Toxicity
No Data available for the mixture.

Component wise data
1. Ethylene glycol
LC50 > 2.5 mg/L air - 6h - Rat

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-Hydroxynapthalane-2,7-disulphonate (EC number 269-505-3)
No data available

(d) Irritant/Corrrosive
No Data available for the mixture.
Component wise data

1. Ethylene glycol
Not irritating

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-

Hydroxynapthalane-2,7-disulphonate (EC number 269-505-3)
Not irritating

(e) Sensitising
No Data available for the mixture.
Component wise data

1. Ethylene glycol
Not sensitising

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-Hydroxynapthalane-2,7-disulphonate (EC number 269-505-3)
Sensitising

(f) Genetic toxicity
No Data available for the mixture.
Component wise data

1. Ethylene glycol
In Vitro- Negative
In Vivo- Negative

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-Hydroxynapthalane-2,7-disulphonate (EC number 269-505-3)
In Vitro- Negative
In Vivo- No data available

(g) Carcigenocity
No Data available for the mixture.
Component wise data

1. Ethylene glycol
The results of this study suggest that ingestion of EG at a dosage of 1000 mg/kg diet may have accelerated the appearance of lymphosarcomas in female mice. However, the incidence was equivocal. There was no evidence of an increase in any other tumor type.

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-Hydroxynapthalane-2,7-disulphonate (EC number 269-505-3)
No data available
(h) STOT- Repeated exposures
No data available for mixtures
Component wise data

1. Ethylene glycol
Oral- Increased mortality appeared in male animals receiving 1 and 4% in the diet but the mortality data for females were difficult to interpret. Calcification of the kidneys and oxalate-containing calculi were observed in males on the 0.5, 1 and 4% diets. Females receiving diets containing 1 and 4% showed calcification but oxalate-containing calculi were detectable only in the females on the 4% diet. One female rat in the group receiving 0.1% ethylene glycol developed a large magnesium phosphate stone which contained no demonstrable amount of oxalate. There was an increased water consumption and appearance of protein in the urine of males receiving the 1 and 4% diets and females on the 4% diet.
Dermal- No testicular damage that was definitely induced by the test substance was detected in any of the male dogs investigated.
LD50 dermal (dog): > 4000 mg/kg bw

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-Hydroxynapthalane-2,7-disulphonate (EC number 269-505-3)
Oral-Based upon the results obtained in this study, the "no-observed-adverse-effect level" of FAT 45'168 / A is 50 mg/kg body weight for male and female rats when administered orally by gavage for a period of 28 days.

(i) Reproductive Toxicity
No Data available for the mixture.
Component wise data

1. Ethylene glycol
Exposure to ethylene glycol resulted in a small but significant decrease in the number of litters per breeding pair, in the number of live pups per pair and in the live pup weight. A significant number of pups in the 1.0% dose group were born with distinct facial deformities. In the retained litters at this dose, the facial deformities were more obvious with age. These malformed animals also exhibited fused ribs and shortened nasal, parietal, and/or frontal bones of the skull. When pups from the high dose group were raised to adulthood (with continued exposure to ethylene

glycol) and mated, they exhibited decreased mating and fertility indices relative to controls handled in the same manner, but there were no effects on litter size, pup weight or sex ratio. The authors deemed ethylene glycol a "weak reproductive toxicant, but a potential teratogen.

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-Hydroxynapthalane-2,7-disulphonate (EC number 269-505-3)
On the basis of this reproduction/ developmental toxicity screening test with FAT 40171/Y TE in male and female Wistar rats with dose levels of 100, 300 and 1000 mg/kg body weight/ day the following conclusions can be made:
No adverse effects of FAT 40171/Y TE were found at dose levels of 100, 300 and 1000 mg/kg body weight. Thus, the NOAEL of FAT 40171/Y TE in this study is considered to be 1000 mg/kg body weight.

(j) Aspiration hazard: not tested
No Data available for the mixture.
Component wise data

1. Ethylene glycol
No data available

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-Hydroxynapthalane-2,7-disulphonate (EC number 269-505-3)

Other information: None

SECTION 12. Ecological information

12.1. Toxicity
Data available for the mixture.
Fish toxicity : Group of 8 fish were exposed to the concentration of 11mg/lit, OECD 203
Conclusion: sample did not cause any death of 8 fishes exposed for 96Hrs.

Component wise data
1. Ethylene glycol

Short term fish
LC50 = 72860 mg/ - 96 h - Pimephales promelas

Long term fish
NOEC = 32000 mg/L - 7 d - Pimephales promelas

Toxicity to aquatic algae and cyanobacteria
other: TGK= > 10000 mg/L - 8 d - Scenedesmus quadricauda

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-Hydroxynapthalane-2,7-disulphonate (EC number 269-505-3)
Short term fish
LC50=300 mg/L - 96 h - Danio rerio
Long term fish
No data available

Toxicity to aquatic algae and cyanobacteria
EC50> 100 mg/L - 72 h - Scenedesmus subspicatus

12.2. Persistence and degradability
Abiotic Degradation: No data available for mixture
Physical- and photo-chemical elimination: No data available for mixture
Biodegradation: After the 28 day test, extent of biodegradation was 89% based on COD measurement. Test method: OECD 302B
Hence, not classified.
Component wise data

1. Ethylene glycol
Readily biodegradable

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-Hydroxynapthalane-2,7-disulphonate (EC number 269-505-3)
Low biodegradation potential

12.3. Bioaccumulative potential

Bioconcentration factor (BCF): No data available for mixture
Component wise data

1. Ethylene glycol
No data available

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-Hydroxynapthalane-2,7-disulphonate (EC number 269-505-3)
No data available

12.4. Mobility in soil
Distribution to environmental compartments: No data available for mixture
Adsorption/ Desorption: No data available for mixture
Component wise data

1. Ethylene glycol
log Koc= 0

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-hydroxynaphthalene-2,7-disulphonate (EC number 269-505-3)
Mean log K oc= <1.5*

12.5. Results of PBT and vPvB assessment
No data available for this mixture
Component wise data

1. Ethylene glycol
This substance is not PBT / vPvB

2. Pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2-sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-hydroxynaphthalene-2,7-disulphonate (EC number 269-505-3)
This substance is not PBT / vPvB

12.6. Other adverse effects
No data available.

SECTION 13. Disposal considerations

13.1. Waste treatment methods
Where possible, arrange for product to be recycled. Dispose of via an authorised person/licensed waste disposal contractor in accordance with local regulations

European waste catalogue (EWC) Hazardous waste Yes.

Waste Code	Waste designation.
08 03 03	Waste from water-based ink
15 01 02	Plastic packaging (packaging)

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

Packaging Material
Disposal: This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container. Packed in HDPE bottles.

P501: Dispose of contents/container in accordance with local/regional/national/international regulation

SECTION 14. Transport information

Note: For the best performance of the inks for application it is advisable to store and transport between 18 deg C to 28 deg C

Land Transport (ADR / RID / GGVSE)

14.1 UN number	Not applicable	14.4 Packing group	Not applicable

14.2 UN proper shipping name	Not applicable	14.5 Environmental hazard	No relevant data	
14.3 Transport hazard class(es)	Not applicable	14.6 Special precautions for user	Hazard identification (Kemler)	Not applicable

Air transport (ICAO-IATA / DGR)

14.1 UN number	Not applicable	14.4 Packing group	Not applicable
14.2 UN proper shipping name	Not applicable	14.5 Environmental hazard	No relevant data
14.3 Transport hazard class(es)	Not applicable	14.6 Special precautions for user	No data available

Inland waterways transport (ADNR / River Rhine)

14.1 UN number	None	
14.2 UN proper shipping name	None	
14.3 Transport hazard class(es)	None	
14.4 Packing group	None	
14.5 Environmental hazard	None	
14.6 Special precautions for user	Classification code	None
	Equipment	None
	Fire cones	None

Sea Transport (IMDG code-GGVSee)

14.1 UN number	None	14.4 Packing group	None	
14.2 UN proper shipping name	None	14.5 Environmental hazard	None	
14.3 Transport hazard class(es)	None	14.6 Special precautions for user	SEM Number	None

14.7. Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

Not transported in quantities more than 25kg packages..

SECTION 15. Regulatory information

15,1. Safety, health and environmental regulations/legislation specific for the substance or mixture
15.1.1. EU - Regulations

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC
Not regulated

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer
Not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC Regulation (EC) No 689/2008 concerning the export and import of dangerous chemicals
Not regulated

Substances of very high concern (SVHC)
This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of ≥ 0.1 % (w/w).

Directive 2000/39/EC - indicative occupational exposure limit values
Ethylene glycol

15.2. Chemical safety assessment
CSA has been performed on Ethylene Glycol

SECTION 16. Other information

16.1 Key literature references and sources for data

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Category	Method of classifications
Skin Sens.	1	Bridging Principle
Eye Irrit.	2	Bridging Principle
STOT Rep. Exp.	2	Bridging Principle
Acute Tox.	4	Bridging Principle

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LEGEND
ACGIH = American Conference of Governmental Industrial Hygienists
DNEL= Derived No-Effect Level
EC= European Commission
LC= Lethal Concentration
OSHA = Occupational Safety and Health Administration (U.S.A.)
PBT= Persistant bioaccumalative toxic
PNEC= Predicted No Effect Concentration
REACH= Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL = Short Term Exposure Limit
STOT= SPECIFIC TARGET ORGAN SYSTEMIC
TWA = Time-weighted Average
UN= United Nation
vPVB = very persistant very Bioaccumalative
WEL= Workplace Exposure Limits

SOURCE
- REACH registered chemicals, http://echa.europa.eu/chem_data_en.asp
- CLP details, http://echa.europa.eu/clp-2015
- Toxnet, http://toxnet.nlm.nih.gov

16.2 List of relevant hazard statements and risk phrases
Hazard statements:
H302: Harmful if swallowed
H319: Causes serious eye irritation
H373: May cause damage to organs through prolonged or repeated exposure
H317: May cause an allergic skin reaction
EU208:
May produce an allergic reaction
Contains pentasodium 4-amino-6-[[5-[(4-amino-6-chloro-1,3,5-triazin-2-yl)amino]-2- sulphonatophenyl]azo]-3-[(2,5-disulphonatophenyl)azo]-5-hydroxynaphthalene-2,7-disulphonate

Contains trisodium 5-[[5-[[4-chloro-6-[(3-sulphonatophenyl)amino]-1,3,5-triazin-2-yl]amino]-2-sulphonatophenyl]azo]-1-ethyl- 1,2-dihydro-6-hydroxy-4-methyl-2-oxopyridine-3-methanesulphonate.

Precautionary statements:
P201: Obtain special instructions before use.
P261: Avoid breathing mist/vapors/spray
P264: Wash hands/ area of contact thoroughly after handling.
P270: Do not eat, drink, or smoke when using this product**.**
P273: Avoid release to the environment.
P280: Wear protective gloves/ protective clothing/ protective eye and face protection
P281: Use personal protective equipment as required
P302+P350: IF ON SKIN: Wash with plenty of soap and water
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse immediately with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice / attention.
P302+ P352 : Wash with plenty of soap and water
P333+P313: If skin irritation or rash occurs: Get medical advice /attention
P314: Get medical attention if you feel unwell.
P405: Store locked up.

P501: Dispose of contents/container in accordance with local/regional/national/international regulation..

16.3 Other

This product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with any legal regulation. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Scale of use, frequency of use and current or available engineering controls must be considered.
For detailed advice on Personal Protective Equipment, refer to the following EUCEN Standards:
EN 16 Personal eye – protection
EN 340 Protective clothing
EN 374 Protective gloves against chemicals and micro – organisms
EN 13832 Footwear protecting against chemicals
EN 133 Respiratory protective devices.

Indicates changes in section/subsection in this version compared to previous version

Note for users:

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