VITA YZ LIQUIDS

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 PRODUCT IDENTIFIER

1.1.1 COMMERCIAL PRODUCT NAME
VITA YZ SHADE LIQUIDS

1.1.2 PRODUCT IDENTIFIER
EZ0Cxyyy(y), EZ0Cxxxxx (except EZ0C18110, EZ0C18350, EZ0C18920)

1.2 RELEVANT IDENTIFIED USES FOR THE SUBSTANCE OR MIXTURE

1.2.1 IDENTIFIED USES
Liquid Dye for Zircon

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

1.3.1 MANUFACTURER
Zirkonzahn srl, Via An der Ahr 7, IT 39030 Gais

1.3.2 SUPPLIER
Zirkonzahn srl, Via An der Ahr 7, IT 39030 Gais

1.3.3 TOX EMERGENCY CALL
+39 0474 066 660

2. HAZARD(S) IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

2.1.1 GHS-US CLASSIFICATION
Skin corrosion/irritation burns Category 1A
Serious eye damage/eye damage
Irritation Category 1
Specific target organ toxicity (single exposure) Category 3

H314 Causes severe skin and eye damage
H318 Causes serious eye damage
H335 May cause respiratory irritation

Full text of H statements: see section 16

2.2 GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

2.2.1 LABELLING IN ACCORDANCE GHS-US LABELING

2.2.1.1 HAZARD PICTOGRAMS (GHS-US)

GHS05
DANGER

GHS07

2.2.1.2 SIGNAL WORD (GHS-US)
H314 – Causes severe skin burn and eye damage
H318 – Causes serious eye damage
H335 – May cause respiratory irritation

2.2.1.3 HAZARD STATEMENTS (GHS-US)
P260 – Do not breathe mist, vapors, spray
P264 – Wash hands, forearms and face thoroughly after handling
P271 – Use only outdoors or in a well-ventilated area
P280 – Wear protective gloves, protective clothing, eye protection, face protection
P301+P330+P331 – If swallowed: rinse mouth. Do NOT
2.3 OTHER HAZARDS WHICH DO NOT RESULT IN CLASSIFICATION
2.4 UNKNOWN ACUTE TOXICITY (GHS-US)

<table>
<thead>
<tr>
<th>Denomination</th>
<th>Proportion (% weight)</th>
<th>CAS – No.</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron (III) nitrate nonahydrate</td>
<td>5 - 20</td>
<td>7782-61-8</td>
<td>Ox. Sol. 3, H272, Skin Irrit. 2, H315, Eye Irrit. 2, H319, STOT SE 3, H335</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

4. FIRST AID MEASURES

4.1 DESCRIPTION
4.1.1 EYE CONTACT
Rinse eyes with water as a precaution. Immediately call a poison center or doctor/physician.
4.1.2 SKIN CONTACT
Wash skin with plenty of water. Call a physician immediately.
4.1.3 INGESTION
Call a poison center/doctor/physician if you feel unwell.
4.1.4 INHALATION
Remove person to fresh air and keep comfortable for breathing.
4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS (ACUTE AND DELAYED)
May cause severe burns.
4.3 IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NECESSARY
Treat symptomatically.

5. FIRE FIGHTING MEASURES
5.1 SUITABLE EXTINGUISHING DEVICES

5.2 UNSUITABLE EXTINGUISHING DEVICES
No information available

5.3 SPECIFIC HAZARDS ARISING FROM THE CHEMICAL
Reactivity: The product is non-reactive under normal conditions of use, storage and transport.
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES
Emergency procedures: Ventilate spillage area. Do not breathe mist, vapors, spray.
Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: “Exposure controls/personal protection”. Avoid sub-soil penetration. Prevent entry to sewers and public waters. Avoid release to the environment.

6.2 ENVIRONMENTAL PRECAUTIONS
Avoid sub-soil penetration. Do not allow into drains or water courses.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP
Take up liquid spill into absorbent material. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.
Disposal must be done according to official regulations.

6.3.2 OTHER INFORMATION
Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

6.4 REFERENCE TO OTHER SECTIONS

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING
Ensure good ventilation of the work station. Wear personal protective equipment. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Store in a well-ventilated place. Keep cool.

7.2 HYGIENE MEASURES

7.3 STORAGE
Keep away from food, drink and animal feeding stuffs.

7.4 INFORMATION ABOUT STORAGE IN ONE COMMON STORAGE FACILITY
Keep only in original container. Store in a closed container.

7.5 SPECIAL RULES ON PACKAGING

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS
Iron (III) nitrate nonhydrate (7782-61-8) – not applicable

8.2 APPROPRIATE ENGINEERING CONTROL
Ensure good ventilation of the work station.

8.3 ENVIRONMENTAL EXPOSURE CONTROLS
Avoid release to the environment. Avoid sub-soil penetration. Do not allow into drains or water courses.

8.4 INDIVIDUAL PROTECTION MEASURES/PERSONAL PROTECTIVE EQUIPMENT

8.4.1 PERSONAL PROTECTIVE EQUIPMENT
Corrosionproof clothing

8.4.2 MATERIALS FOR PROTECTIVE CLOTHING
Acid-resistant clothing

8.4.3 HAND PROTECTION
Wear suitable gloves resistant to chemical penetration. EN 374.
Choosing the proper glove is a decision that depends not only
on the type of material, but also on other quality features, which differ for each manufacturer. The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed. Gloves must be replaced after each use and whenever signs of wear or perforation appear. Sealed safety goggles must be worn. Gloves must be replaced after each use and whenever signs of wear or perforation appear.

8.4.4 EYE PROTECTION
Sealed safety goggles

8.4.5 SKIN AND BODY PROTECTION
Wear suitable protective clothing

8.4.6 RESPIRATORY PROTECTION
Not required for normal conditions of use. In case of insufficient ventilation, wear suitable respiratory equipment

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

9.1.1 FORM
Liquid

9.1.2 COLOUR
Different according to colouring

9.1.3 ODOR
Odourless

9.1.4 ODOR THRESHOLD
No data available

9.1.5 pH
1.40 – 4.80

9.1.6 FREEZING POINT
Not data available

9.1.7 MELTING POINT
Not applicable

9.1.8 BOILING POINT
Not data available

9.1.9 FLASH POINT
No data available

9.1.10 RELATIVE EVAPORATION RATE (BUTYL ACETATE = 1)
Not data available

9.1.11 FLAMMABILITY (SOLID, GAS)
Not applicable

9.1.12 VAPOR PRESSURE
Not data available

9.1.13 RELATIVE VAPOR DENSITY AT 20°C
Not data available

9.1.14 RELATIVE DENSITY
Not data available

9.1.15 SOLUBILITY
Not data available

9.1.16 LOG POW
Not data available

9.1.17 AUTO-IGNITION TEMPERATURE
Not data available

9.1.18 DECOMPOSITION TEMPERATURE
Not data available

9.1.19 VISCOSITY, KINEMATIC
Not data available

9.1.20 VISCOSITY, DYNAMIC
Not data available

9.1.21 EXPLOSION LIMITS
Not data available

9.1.22 EXPLOSIVE PROPERTIES
Not data available

9.1.23 OXIDIZING PROPERTIES
Not data available

9.2 ADDITIONAL INFORMATION
No additional information available

10. STABILITY AND REACTIVITY
10.1 REACTIVITY

The product is non-reactive under normal conditions of use, storage and transport.

10.2 CHEMICAL STABILITY

Stable under normal conditions.

10.3 POSSIBLE DANGEROUS REACTIONS

No dangerous reactions known under normal conditions of use.

10.4 CONDITIONS TO AVOID

None under recommended storage and handling conditions (see section 7)

10.5 INCOMPATIBLE MATERIALS

Strong bases.

10.6 HAZARDOUS DECOMPOSITION

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Iron (III) nitrate nonahydrate (7782-61-8)

11.1.1 ACUTE TOXICITY

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

LD50 oral rat 3250 mg/kg body weight
ATE US (oral) 3250 mg/kg body weight

11.1.2 SKIN CORROSION/IRRITATION

Causes severe skin burns and eye damage.

pH: 1.40 – 4.80

11.1.3 SERIOUS EYE DAMAGE/IRRITATION

Causes serious eye damage

pH: 1.40 – 4.80

11.1.4 RESPIRATORY OR SKIN SENSITISATION

Not classified

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

11.1.5 GERM CELL MUTAGENICITY

Not classified

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

11.1.6 CARCINOGENICITY

Not classified

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

11.1.7 REPRODUCTIVE TOXICITY

Not classified

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

11.1.8 SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE

May cause respiratory irritation

11.1.9 SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE

Not classified

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

11.1.10 ASPIRATION HAZARD

Not classified

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

12. ECOLOGICAL INFORMATION

12.1 TOXICITY

Ecology – general: Before neutralisation, the product may represent a danger to aquatic organisms. May cause pH changes in aqueous ecological systems.

Not applicable for inorganic substances.

12.2 PERSISTENCE AND DEGRADABILITY

Not applicable for inorganic substances.

12.3 BIOACCUMULATIVE POTENTIAL

Ecology – soil: May cause pH changes in aqueous ecological systems.

Effect on the global warming: No known effects from this product.

GWPmix comment: No known effects from this product.

12.4 MOBILITY IN SOIL

12.5 OTHER ADVERSE EFFECTS
13. DISPOSAL CONSIDERATIONS

13.1 DISPOSAL METHODS
Waste treatment methods: Disposal must be done according to official regulations. Comply with applicable regulations. Do not discharge into drains or the environment.

14. TRANSPORT INFORMATION

14.1 DEPARTMENT OF TRANSPORTATION (DOT)
IN ACCORDANCE WITH DOT

14.1.1 TRANSPORT DOCUMENT DESCRIPTION

14.1.2 UN-No. (DOT)

14.1.3 PROPER SHIPPING NAME (DOT)

14.1.4 CLASS (DOT)

14.1.5 PACKING GROUP (DOT)

14.1.6 HAZARD LABELS (DOT)

14.1.7 DOT PACKAGING NON BULK (49 CFR 173.xxx)

14.1.8 DOT PACKAGING BULK (49 CFR 173.xxx)

14.1.9 DOT SYMBOLS

14.1.10 DOT SPECIAL PROVISIONS (49 CFR 172.102)

14.1.11 DOT PACKAGING EXCEPTIONS (49 CFR 173.xxx)

14.1.12 DOT QUANTITY LIMITATIONS PASSENGER AIRCRAFT/RAIL (49 CFR 173.27)

UN2801 Dyes, liquid, corrosive, n.o.s., 8, II

Dyes, liquid, corrosive, n.o.s.

8 – Class 8 – Corrosive material 49 CFR 173.136

II – Medium Danger

8 – Corrosive

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G-Identifies PSN requiring a technical name

11 - The hazardous material must be packaged as either a liquid or a solid, as appropriate, depending on its physical form at 55 C (131 F) at atmospheric pressure. B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.

T11 - 6 178.274(d)(2) Normal............. 178.275(d)(3)

TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.

TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

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I L
14.1.13 DOT QUANTITY LIMITATIONS CARGO AIRCRAFT ONLY (49 CFR 175.75)

14.1.14 DOT VESSEL STORAGE LOCATION

14.1.15 EMERGENCY RESPONSE GUIDE (ERG) NUMBER

14.1.16 OTHER INFORMATION

14.1.17 TDG

14.1.18 TRANSPORT BY SEA

14.1.18.1 TRANSPORT DOCUMENT DESCRIPTION (IMDG)

14.1.18.2 UN-No. (IMDG)

14.1.18.3 PROPER SHIPPING NAME (IMDG)

14.1.18.4 CLASS (IMDG)

14.1.18.5 PACKING GROUP (IMDG)

14.1.18.6 LIMITED QUANTITIES (IMDG)

14.1.19 AIR TRANSPORT

14.1.19.1 TRANSPORT DOCUMENT DESCRIPTION (IATA)

14.1.19.2 UN-No. (IATA)

14.1.19.3 PROPER SHIPPING NAME (IATA)

14.1.19.4 CLASS (IATA)

14.1.19.5 PACKING GROUP (IATA)

15. REGULATORY INFORMATION

15.1 US FEDERAL REGULATIONS

SARA Section 311/312 Hazard Classes – Not listed
All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2 INTERNATIONAL REGULATIONS

No additional information available

15.3 US STATE REGULATIONS

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

16. OTHER INFORMATION
FULL TEXT OF H-PHRASES

<table>
<thead>
<tr>
<th>H272</th>
<th>May intensify fire; oxidizer</th>
</tr>
</thead>
<tbody>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
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<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

ABBREVIATIONS AND ACRONYMS

ADN: European agreement concerning the international carriage of dangerous goods by inland waterways  
ADR: European agreement concerning the international carriage of dangerous goods by road  
ATE: Acute toxicity estimate  
BCF: Bioconcentration factor  
CLP: Classification labelling packaging regulation; Regulation (EC) No 1272/2008  
DMEL: Derived minimal effect level  
DNEL: Derived-No effect level  
DPD: Dangerous preparations directive 1999/45/EC  
GHS: Globally harmonized system of classification and labelling of chemicals  
IARC: International agency for research on cancer  
EC50: Median effective concentration  
IATA: International air transport association  
IMDG: International maritime dangerous goods  
LC50: Median lethal concentration  
LD50: Median lethal dose  
LOAEL: Lowest observed adverse effect level  
NOAEL: No-Observed adverse effect level  
NOEC: No-Observed effect concentration  
OECD: Organisation for economic Co-operation and development  
PBT: Persistent bioaccumulative toxic  
PNEC: Predicted No-Effect concentration  
REACH: Registration, evaluation, authorisation and restriction of chemicals regulation (EC) No 1907/2006  
RID: Regulations concerning the international carriage of dangerous goods by rail  
SDS: Safety data sheet  
STP: Sewage treatment plant  
TLM: Median tolerance limit  
vPvB: Very persistent and very bioaccumulative

The aforementioned data correspond to our present state of knowledge and experience. The material safety data sheet serves as description of the products with regards to its necessary safety measures. The indications do not have the meaning of guarantees on properties.

Department issuing data specification sheet:
Zirkonzahn srl,  
Via An der Ahr 7,  
IT 39030 Gais