SAFETY DATA SHEETS

This SDS packet was issued with item:

070871392

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

070685362 070871376 071021443 071432608 071443274 071447564 071447572 071447580 071447598 071447606 071447614 071447622 071447630 071447648 071447655

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

071447663 071447689

SI0373
Date of issue: 21.03.2019
In conformity with US OSHA Hazard Communication Standard (HCS 2012); 29 CFR Part 1910.1200

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 HT/ST/XT SHADE LIQUIDS / YZ EFFECT LIQUIDS EZ0Cxyyyy(y), EZ0Cxxxxx (ausgenommen EZ0C18110, EZ0C18350, EZ0C18920)
1.1.2 PRODUCT IDENTIFIER	

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	H314	Causes severe skin and eye damage
Serious eye damage/eye damage Irritation Category 1	H318	Causes serious eye
Specific target organ toxicity (single exposure) Category 3	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


GHS07

2.2.1.2 SIGNAL WORD (GHS-US)

DANGER

2.2.1.3 HAZARD STATEMENTES (GHS-US)

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

2.2.1.4 PRECAUTIONARY 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

induce vomiting
P303+P361+P353 – If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 – If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 – If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 – Immediately call a POISON CENTER, a doctor
P321 – Specific treatment (see … on this label)
P363 – Wash contaminated clothing before reuse
P403+P233 – Store in a well-ventilated place. Keep container tightly closed
P405 – Store locked up
P501 – Dispose of contents/container to an approved waste disposal plant

2.3 OTHER HAZARDS WHICH DO NOT RESULT IN CLASSIFICATION: No additional information available

2.4 UNKNOWN ACUTE TOXICITY (GHS-US): Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 SUBSTANCES: Not applicable

3.2 MIXTURES

Denomination	Proportion (% weight)	CAS – No.	Classification
Iron (III) nitrate nonahydrate	5 - 20	7782-61-8	Ox. Sol. 3, H272 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3; H335
Erbium trinitrate hydrate	25 - 70	100641-14-3	Ox. Sol. 2, H272 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3; H335
Neodymium trinitrate hexahydrate	25 - 50	16454-60-7	Ox. Sol. 3, H272 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3; H335

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 SYMTOMS 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	Water spray. Dry powder. Foam. Carbon dioxide.
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.
5.4 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS	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	
6.1.1 FOR NON-EMERGENCY PERSONNEL	Emergency procedures: Ventilate spillage area. Do not breathe mist, vapors, spray.
6.1.2 FOR EMERGENCY RESPONDERS	Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: “Exposure controls/personal protection”.
6.2 ENVIROMENTAL PRECAUTIONS	Avoid sub-soil penetration. Prevent entry to sewers and public waters. Avoid release to the environment.
6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP	
6.3.1 METHODS FOR CLEANING UP	Take up liquid spill into absorbent material. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.
6.3.2 OTHER INFORMATION	Disposal must be done according to official regulations.
6.4 REFERENCE TO OTHER SECTIONS	Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING	Ensure good ventilation of the work station. Wear personal protective equipment.
7.2 HYGIENE MEASURES	Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
7.3 STORAGE	Store in a well-ventilated place. Keep cool.
7.4 INFORMATION ABOUT STORAGE IN ONE COMMON STORAGE FACILITY	Keep away from food, drink and animal feeding stuffs.
7.5. SPECIAL RULES ON PACKAGING	Keep only in original container. Store in a closed container.

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 break trough 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
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 ODOUR	Odourless
9.1.4 ODOUR 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

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

Iron (III) nitrate nonahydrate (7782-61-8)	
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 med)
11.1.5 GERM CELL MUTAGENICITY	Not classified (Based on available data, the classification criteria are not met)
11.1.6 CARCIOGENICITY	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.
12.2 PERSISTENCE AND DEGRADABILITY	Not applicable for inorganic substances.
12.3 BIOACCUMULATIVE POTENTIAL	Not applicable for inorganic substances.
12.4 MOBILITY IN SOIL	Ecology – soil: May cause pH changes in aqueous ecological systems.
12.5 OTHER ADVERSE EFFECTS	Effect on the global warming: No known effects from this product. GWPmix comment: No known effects from this product.

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 DEPARMENT OF TRANSPORTATION (DOT)
IN ACCORDANCE WITH DOT

14.1.1 TRANSPORT DOCUMENT DESCRIPTION	UN2801 Dyes, liquid, corrosive, n.o.s., 8, II
14.1.2 UN-No. (DOT)	UN2801
14.1.3 PROPER SHIPPING NAME (DOT)	Dyes, liquid, corrosive, n.o.s.
14.1.4 CLASS (DOT)	8 – Class 8 – Corrosive material 49 CFR 173.136
14.1.5 PACKING GROUP (DOT)	II – Medium Danger
14.1.6 HAZARD LABELS (DOT)	8 – Corrosive 
14.1.7 DOT PACKAGING NON BULK (49 CFR 173.xxx)	202
14.1.8 DOT PACKAGING BULK (49 CFR 173.xxx)	242
14.1.9 DOT SYMBOLS	G-Identifies PSN requiring a technical name
14.1.10 DOT SPECIAL PROVISIONS (49 CFR 172.102)	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 betweenthe 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.
14.1.11 DOT PACKAGING EXCEPTIONS (49 CFR 173.xxx)	154
14.1.12 DOT QUANTITY LIMIATIONS PASSENGER AIRCRAFT/RAIL (49 CFR 173.27)	1 L

14.1.13 DOT QUANTITY LIMITATIONS CARGO AIRCRAFT ONLY (49 CFR 175.75)	30 L
14.1.14 DOT VESSEL STORAGE LOCATION	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel
14.1.15 EMERGENCY RESPONSE GUIDE (ERG) NUMBER	154
14.1.16 OTHER INFORMATION	No supplementary information available.
14.1.17 TDG	Not applicable
14.1.18 TRANSPORT BY SEA	
14.1.18.1 TRANSPORT DOCUMENT DESCRIPTION (IMDG)	UN 2801 DYE, LIQUID, CORROSIVE, N.O.S. (Iron(III) nitrate nonahydrate; Chromic nitrate nonahydrate; Praseodymium(III) nitrate hexahydrate; Erbium trinitrate hydrate; Neodymium trinitrate hexahydrate), 8, II
14.1.18.2 UN-No. (IMDG)	2801
14.1.18.3 PROPER SHIPPING NAME (IMDG)	DYE, LIQUID, CORROSIVE, N.O.S.
14.1.18.4 CLASS (IMDG)	8 - Corrosive substances
14.1.18.5 PACKING GROUP (IMDG)	II - substances presenting medium danger
14.1.18.6 LIMITED QUANTITIES (IMDG)	1 L
14.1.19 AIR TRANSPORT	
14.1.19.1 TRANSPORT DOCUMENT DESCRIPTION (IATA)	UN 2801 Dye (intermediate), liquid, corrosive, n.o.s. (Iron(III) nitrate nonahydrate; Chromic nitrate nonahydrate; Praseodymium(III) nitrate hexahydrate; Erbium trinitrate hydrate; Neodymium trinitrate hexahydrate), 8, II
14.1.19.2 UN-No. (IATA)	2801
14.1.19.3 PROPER SHIPPING NAME (IATA)	Dye (intermediate), liquid, corrosive, n.o.s.
14.1.19.4 CLASS (IATA)	8 – Corrosives
14.1.19.5 PACKING GROUP (IATA)	II – Medium Danger

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 Envrionmental 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

16.1 REVISION DATE 20.09.2017

FULL TEXT OF H-PHRASES

H272	May intensify fire; oxidizer
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation

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