

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/08/2019

Reviewed on 01/08/2019

1 Identification

- **Product identifier**
- **Trade name: ST-Rich pale gold**
- **Article number: Series 750-103**
- **Application of the substance / the mixture** Printing inks
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
DECO TEChnology Group Inc.
PRINTCOLOR SCREEN AG
TEL (714) 639-3326
FAX (714) 639-2261
- **Information department:** Product safety department
- **Emergency telephone number:** 800-535-5053

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02 GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

xylene
4-isocyanatosulphonyltoluene
(benzothiazol-2-ylthio)succinic acid

- **Hazard statements**

Flammable liquid and vapor.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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- May cause an allergic skin reaction.
- May cause damage to organs through prolonged or repeated exposure.
- **Precautionary statements**
 - Obtain special instructions before use.
 - Do not handle until all safety precautions have been read and understood.
 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 - Keep container tightly closed.
 - Ground/bond container and receiving equipment.
 - Use explosion-proof electrical/ventilating/lighting/equipment.
 - Use only non-sparking tools.
 - Take precautionary measures against static discharge.
 - Avoid breathing vapours.
 - Wash thoroughly after handling.
 - Contaminated work clothing must not be allowed out of the workplace.
 - Wear protective gloves / eye protection.
 - Use personal protective equipment as required.
 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - Get medical advice/attention if you feel unwell.
 - If skin irritation or rash occurs: Get medical advice/attention.
 - Specific treatment (see on this label).
 - If eye irritation persists: Get medical advice/attention.
 - If experiencing respiratory symptoms: Call a poison center/doctor.
 - Wash contaminated clothing before reuse.
 - In case of fire: Use for extinction: CO2, powder or water spray.
 - Store in a well-ventilated place. Keep cool.
 - Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 108-65-6	2-methoxy-1-methylethyl acetate	10-25%
CAS: 108-94-1	cyclohexanone	10-25%
CAS: 54839-24-6	2-ethoxy-1-methylethyl acetate	10-25%
CAS: 123-42-2	4-hydroxy-4-methylpentan-2-one	2.5-10%

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CAS: 7429-90-5	aluminium powder (stabilized)	2.5-10%
CAS: 96-48-0	4-Hydroxybutanoic acid lactone	1-2.5%
CAS: 64742-95-6	Solvent naphtha (petroleum), light arom.	1-2.5%
CAS: 64742-48-9	Naphtha (petroleum), hydrotreated heavy	1-2.5%
CAS: 1330-20-7	xylene	1-2.5%
CAS: 4083-64-1	4-isocyanatosulphonyltoluene	<1%
CAS: 95154-01-1	(benzothiazol-2-ylthio)succinic acid	<0.5%

4 First-aid measures

- **Description of first aid measures**

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:** If symptoms persist consult doctor.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**

• **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.

• **For safety reasons unsuitable extinguishing agents:** Water with full jet

• **Special hazards arising from the substance or mixture** No further relevant information available.

- **Advice for firefighters**

• **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

• **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

- **Protective Action Criteria for Chemicals**

- **PAC-1:**

CAS: 108-65-6	2-methoxy-1-methylethyl acetate	50 ppm
CAS: 108-94-1	cyclohexanone	60 ppm
CAS: 123-42-2	4-hydroxy-4-methylpentan-2-one	150 ppm
CAS: 96-48-0	4-Hydroxybutanoic acid lactone	3.6 mg/m ³

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CAS: 141-78-6	ethyl acetate	1,200 ppm
CAS: 122-99-6	2-Phenoxyethanol	1.5 ppm
CAS: 70657-70-4	2-methoxypropyl acetate	50 ppm
CAS: 7664-38-2	phosphoric acid	3 mg/m ³

· PAC-2:

CAS: 108-65-6	2-methoxy-1-methylethyl acetate	1,000 ppm
CAS: 108-94-1	cyclohexanone	830 ppm
CAS: 123-42-2	4-hydroxy-4-methylpentan-2-one	350 ppm
CAS: 96-48-0	4-Hydroxybutanoic acid lactone	39 mg/m ³
CAS: 141-78-6	ethyl acetate	1,700 ppm
CAS: 122-99-6	2-Phenoxyethanol	16 ppm
CAS: 70657-70-4	2-methoxypropyl acetate	1,000 ppm
CAS: 7664-38-2	phosphoric acid	30 mg/m ³

· PAC-3:

CAS: 108-65-6	2-methoxy-1-methylethyl acetate	5000* ppm
CAS: 108-94-1	cyclohexanone	5000* ppm
CAS: 123-42-2	4-hydroxy-4-methylpentan-2-one	2100* ppm
CAS: 96-48-0	4-Hydroxybutanoic acid lactone	310 mg/m ³
CAS: 141-78-6	ethyl acetate	10000** ppm
CAS: 122-99-6	2-Phenoxyethanol	97 ppm
CAS: 70657-70-4	2-methoxypropyl acetate	5,000 ppm
CAS: 7664-38-2	phosphoric acid	150 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

CAS: 108-65-6 2-methoxy-1-methylethyl acetate

WEEL | Long-term value: 50 ppm

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CAS: 108-94-1 cyclohexanone

PEL	Long-term value: 200 mg/m ³ , 50 ppm
REL	Long-term value: 100 mg/m ³ , 25 ppm Skin
TLV	Long-term value: 50 mg/m ³ , 20 ppm Skin

CAS: 123-42-2 4-hydroxy-4-methylpentan-2-one

PEL	Long-term value: 240 mg/m ³ , 50 ppm
REL	Long-term value: 240 mg/m ³ , 50 ppm
TLV	Long-term value: 238 mg/m ³ , 50 ppm

CAS: 7429-90-5 aluminium powder (stabilized)

PEL	Long-term value: 15* [*] ; 5** ^{**} mg/m ³ *Total dust; ** Respirable fraction
REL	Long-term value: 10* [*] 5** ^{**} mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV	Long-term value: 1* [*] mg/m ³ as Al; *as respirable fraction

CAS: 1330-20-7 xylene

PEL	Long-term value: 435 mg/m ³ , 100 ppm
REL	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV	Short-term value: 651 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm BEI

· Ingredients with biological limit values:

CAS: 108-94-1 cyclohexanone

BEI	80 mg/L Medium: urine Time: end of shift at end of workweek Parameter: 1.2-Cyclohexanediol with hydrolysis (nonspecific, semi-quantitative)
	8 mg/L Medium: urine Time: end of shift Parameter: Cyclohexanol with hydrolysis (nonspecific, semi-quantitative)

CAS: 1330-20-7 xylene

BEI	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids
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· Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

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· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Butyl rubber, BR

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Fluid
· Color:	According to product specification
· Odor:	Characteristic
· Odor threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	124 °C (255.2 °F)

· **Flash point:** 52 °C (125.6 °F) (Abel Pensky)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 280 °C (536 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/ vapor mixtures are possible.

· **Explosion limits:**

· Lower:	1.7 Vol %
· Upper:	8.4 Vol %

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· Vapor pressure at 20 °C (68 °F):	0.4 hPa (0.3 mm Hg)
· Density at 20 °C (68 °F):	1.21 g/cm ³ (10.1 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic at 20 °C (68 °F):	3500 mPas
Kinematic:	Not determined.
VOC content:	32.4 %
	345.1 g/l / 2.88 lb/gal
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

CAS: 64742-95-6 Solvent naphtha (petroleum), light arom.

Oral	LD50	3,592 mg/kg (rat)
Dermal	LD50	3,160 mg/kg (rab)
Inhalative	LC50/4 h	>10.2 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

CAS: 108-94-1	cyclohexanone	3
CAS: 96-48-0	4-Hydroxybutanoic acid lactone	3
CAS: 1330-20-7	xylene	3

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· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT, IATA**

UN1210

· **ADR, ADN, IMDG**

Void

· **UN proper shipping name**

· **DOT**

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· **ADR, ADN, IMDG**

Void

· **IATA**

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· **Transport hazard class(es)**

· **DOT**



· **Class**

3 Flammable liquids

· **Label**

3


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· ADR	
· Class	Void Not restricted good <450l according to ADR 2.2.3.1.5 free
· ADN/R Class:	Void
· IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, IATA	III
· ADR, IMDG	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	Void

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

CAS: 7429-90-5 aluminium powder (stabilized)

CAS: 122-99-6 2-Phenoxyethanol

CAS: 7664-38-2 phosphoric acid

· TSCA (Toxic Substances Control Act):

CAS: 108-65-6 2-methoxy-1-methylethyl acetate

CAS: 108-94-1 cyclohexanone

CAS: 123-42-2 4-hydroxy-4-methylpentan-2-one

CAS: 5590-18-1 1H-isoindol-1-one,3,3'-(1,4-phenylenedinitrilo)bis[4,5,6,7-tetrachloro-2,3-dihydro-

CAS: 7429-90-5 aluminium powder (stabilized)

CAS: 96-48-0 4-Hydroxybutanoic acid lactone

CAS: 4083-64-1 4-isocyanatosulphonyltoluene

CAS: 95154-01-1 (benzothiazol-2-ylthio)succinic acid

CAS: 141-78-6 ethyl acetate

CAS: 122-99-6 2-Phenoxyethanol

CAS: 6683-19-8 Pentaerythritol tetrakis (3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate)

CAS: 27138-31-4 oxydipropyl dibenzoate

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CAS: 7664-38-2	phosphoric acid
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· **TSCA new (21st Century Act) (Substances not listed)**

CAS: 54839-24-6	2-ethoxy-1-methylethyl acetate
CAS: 64742-95-6	Solvent naphtha (petroleum), light arom.
CAS: 64742-48-9	Naphtha (petroleum), hydrotreated heavy
CAS: 1330-20-7	xylene

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogen categories**

· **EPA (Environmental Protection Agency)**

CAS: 1330-20-7	xylene	I
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· **TLV (Threshold Limit Value established by ACGIH)**

CAS: 108-94-1	cyclohexanone	A3
CAS: 7429-90-5	aluminium powder (stabilized)	A4
CAS: 1330-20-7	xylene	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

xylene
4-isocyanatosulphonyltoluene
(benzothiazol-2-ylthio)succinic acid

· **Hazard statements**

Flammable liquid and vapor.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.

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Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Avoid breathing vapours.
 Wash thoroughly after handling.
 Contaminated work clothing must not be allowed out of the workplace.
 Wear protective gloves / eye protection.
 Use personal protective equipment as required.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Get medical advice/attention if you feel unwell.
 If skin irritation or rash occurs: Get medical advice/attention.
 Specific treatment (see on this label).
 If eye irritation persists: Get medical advice/attention.
 If experiencing respiratory symptoms: Call a poison center/doctor.
 Wash contaminated clothing before reuse.
 In case of fire: Use for extinction: CO₂, powder or water spray.
 Store in a well-ventilated place. Keep cool.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Product safety department
- **Contact:** hse@printcolor.ch
- **Date of preparation / last revision** 01/08/2019 / -
- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 BEI: Biological Exposure Limit
 Flam. Liq. 3: Flammable liquids – Category 3
 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
 Resp. Sens. 1: Respiratory sensitisation – Category 1
 Skin Sens. 1: Skin sensitisation – Category 1
 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2