

# SAFETY DATA SHEET

KT25012U01

## Section 1. Identification

**GHS product identifier** : TOTAL CHROME FREE 4G CASE  
**Product type** : Liquid.  
**SDS #** : 6qe4:k3e8:8j8

### Relevant identified uses of the substance or mixture and uses advised against

#### Identified uses

Speciality chemicals for use in printing industry

#### Uses advised against

Not applicable.

#### Reason

**Supplier's details** : Varn International, Inc., a Flint Group Business  
1333 N. Kirk Road  
Batavia, IL 62510  
United States

**Emergency telephone number (with hours of operation)** : For Health and Safety Questions during business hours call 1-800-336-8276  
24 Hour Emergency Spill Contact call 1-800-424-9300 Chemtrec (US/Canada)

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (central nervous system (CNS), kidneys) - Category 1  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys) - Category 1

### GHS label elements

#### Hazard pictograms



**Signal word** : Danger

**Hazard statements** : May cause an allergic skin reaction.  
Suspected of causing cancer.  
Causes damage to organs. (central nervous system (CNS), kidneys)  
Causes damage to organs through prolonged or repeated exposure. (kidneys)

### Precautionary statements

**Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

## Section 2. Hazards identification

- Response** : Get medical attention if you feel unwell. IF exposed: Call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.
- Storage** : Store locked up.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	%	CAS number
Ethanediol	1 - 5	107-21-1
2-(2-ethoxyethoxy)ethanol	1 - 5	111-90-0
cobalt nitrate	.1 - 1	10141-05-6

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

## Section 4. First aid measures

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Causes damage to organs following a single exposure if inhaled.
- Skin contact** : Causes damage to organs following a single exposure in contact with skin. May cause an allergic skin reaction.
- Ingestion** : Causes damage to organs following a single exposure if swallowed.

#### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
metal oxide/oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

<u>Ingredient name</u>	<u>Exposure limits</u>
Ethanediol	<b>ACGIH TLV (United States, 3/2018).</b> STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Inhalable fraction. Aerosol only. STEL: 50 ppm 15 minutes. Form: Vapor fraction TWA: 25 ppm 8 hours. Form: Vapor fraction
2-(2-ethoxyethoxy)ethanol	<b>OSHA PEL 1989 (United States, 3/1989).</b> CEIL: 125 mg/m <sup>3</sup> CEIL: 50 ppm
cobalt nitrate	<b>OARS WEEL (United States, 7/2018).</b> TWA: 25 ppm 8 hours. <b>ACGIH TLV (United States, 3/2018).</b> TWA: 0.02 mg/m <sup>3</sup> , (as Co) 8 hours.

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

Physical state	: Liquid.
Color	: Reddish-orange
Odor	: Not available.
Odor threshold	: Not available.
pH	: 3.4
Melt point/Freeze point	: Not available.
Boiling point	: Not available.
Flash point	: Higher than 93.3°C (200°F).
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: Not available.
Solubility	: Not available.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Kinematic (40°C (104°F)): <0.2 cm <sup>2</sup> /s (<20 cSt)
Density	: 9.241 lbs/gal
<b>VOC data</b>	
VOC % by weight	: 7.51
VOC % by volume	: 7.86
VOC lbs/gallon	: 0.69
VOC lbs/gal less water	: 2.06

## Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethanediol	LD50 Oral	Rat	4700 mg/kg	-
2-(2-ethoxyethoxy)ethanol	LD50 Oral	Rat	7500 mg/kg	-
cobalt nitrate	LD50 Oral	Rat	434 mg/kg	-

#### Carcinogenicity

##### Classification

Product/ingredient name	OSHA	IARC	NTP
cobalt nitrate	-	2B	Reasonably anticipated to be a human carcinogen.

#### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
ethanediol	Category 1	Oral	central nervous system (CNS) and kidneys

#### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
ethanediol	Category 1	Oral	kidneys

#### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

#### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : Causes damage to organs following a single exposure if inhaled.

**Skin contact** : Causes damage to organs following a single exposure in contact with skin. May cause an allergic skin reaction.

**Ingestion** : Causes damage to organs following a single exposure if swallowed.

#### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness

**Ingestion** : No specific data.

#### Delayed and immediate effects and also chronic effects from short and long term exposure

##### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

## Section 11. Toxicological information

### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**General** : Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

## Section 12. Ecological information

### Toxicity

Not available.

### Persistence and degradability

Not available.

### Bioaccumulative potential

Not available.

### Mobility in soil

Not available.

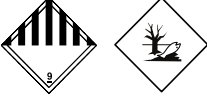
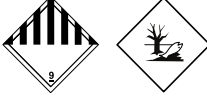
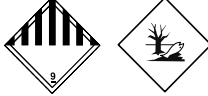
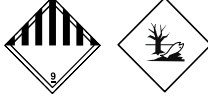
**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.



## Section 14. Transport information

	<b>DOT Classification</b>	<b>TDG Classification</b>	<b>IMDG</b>	<b>IATA</b>
<b>UN number</b>	UN3082	UN3082	UN3082	UN3082
<b>UN proper shipping name</b>	Environmentally hazardous substance, liquid, n.o.s..	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (cobalt nitrate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (cobalt nitrate)	Environmentally hazardous substance, liquid, n.o.s. (cobalt nitrate)
<b>Transport hazard class(es)</b>	9 	9 	9 	9 
<b>Packing group</b>	III	III	III	III
<b>Environmental hazards</b>	Yes.	Yes.	Yes.	Yes.
<b>Additional information</b>	<p>Non-bulk packages of this product are not regulated as hazardous materials unless transported by inland waterway. This product is not regulated as a hazardous material when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of §§ 173.24 and 173.24a.</p> <p><b>Limited quantity</b> Yes.</p> <p><b>Packaging instruction</b> Exceptions: 155. Non-bulk: 203. Bulk: 241.</p> <p><b>Special provisions</b> 8, 146, 173, 335, IB3, T4, TP1, TP29</p>	<p>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark).</p> <p>Non-bulk packages of this product are not regulated as dangerous goods when transported by road or rail.</p> <p><b>Explosive Limit and Limited Quantity Index</b> 5</p> <p><b>Special provisions</b> 16, 99</p>	<p>This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.</p> <p><b>Emergency schedules</b> F-A, S-F</p> <p><b>Special provisions</b> 274, 335, 969</p>	<p>This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.</p> <p><b>Quantity limitation</b></p> <p>Passenger and Cargo Aircraft: 450 L.</p> <p>Packaging instructions: 964.</p> <p>Cargo Aircraft Only: 450 L. Packaging instructions: 964.</p> <p>Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y964.</p> <p><b>Special provisions</b> A97, A158, A197</p>

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 15. Regulatory information

**U.S. Federal regulations** : All components of this product are listed as active or exempt from the TSCA chemical inventory.

### SARA 311/312

**Classification** : Immediate (acute) health hazard  
Delayed (chronic) health hazard

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	Nitric acid, magnesium salt, hydrate	13446-18-9	9.7004
	Ethenediol	107-21-1	4.4827
	2-(2-ethoxyethoxy)ethanol	111-90-0	2.911
	cobalt nitrate	10141-05-6	0.33642
<b>Supplier notification</b>	Nitric acid, magnesium salt, hydrate	13446-18-9	9.7004
	Ethenediol	107-21-1	4.4827
	2-(2-ethoxyethoxy)ethanol	111-90-0	2.911
	cobalt nitrate	10141-05-6	0.33642

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

#### California Prop. 65

**WARNING:** This product can expose you to Ethylene Glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## Section 16. Other information

### History

**Date of printing** : 12/11/2019

**Date of issue/Date of revision** : 12/3/2019

**Date of previous issue** : 12/3/2019

**Version** : 5

### Key to abbreviations

: ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations

▣ Indicates information that has changed from previously issued version.

### Notice to reader

Flint Group has prepared this Safety Data Sheet ("SDS") in compliance with 29 CFR 1910.1200, understands that its customers may use this SDS to comply with that section, and believes that the data set forth herein are accurate as of the date hereof; however, this SDS shall not constitute a warranty with respect thereto.