

redimark

SAFETY DATA SHEET T602K Black Ink

1. Identification

Product identifier

Product name T602K Black Ink
Product number 71204779, 71204782, 71204785
Container size Single Use Cartridge, 1 Pack, 2 Pack, 5 Pack

Recommended use of the chemical and restrictions on use

Application Printing ink.
Uses advised against Use only for intended applications.

Details of the supplier of the safety data sheet

Supplier Redimark
 27520 SW 95th Avenue
 Wilsonville, OR 97070

Emergency telephone number

Emergency telephone Chemtrec US : 1-800-424-9300 Chemtrec World: 1-703-527-3887

2. Hazard(s) identification

Classification of the substance or mixture

OSHA Regulatory Status This Product is Hazardous under the OSHA Hazard Communication Standard.
Physical hazards Flam. Liq. 2 - H225
Health hazards Not Classified
Environmental hazards Aquatic Chronic 3 - H412

Label elements

Pictogram



Signal word Danger

Hazard statements H225 Highly flammable liquid and vapor.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/ container in accordance with national regulations.

3. Composition/information on ingredients

T602K Black Ink

Mixtures

Ethanol	80-<90%
CAS number: 64-17-5	
Classification Flam. Liq. 2 - H225 Eye Irrit. 2A - H319	
Dye Stuff	5-<10%
CAS number: —	
Classification Aquatic Chronic 3 - H412	
Cyclohexanone	5-<10%
CAS number: 108-94-1	
Classification Flam. Liq. 3 - H226 Acute Tox. 4 - H302 Acute Tox. 3 - H311 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Dam. 1 - H318	

The full text for all hazard statements is displayed in Section 16.

4. First-aid measures

Description of first aid measures

General information	Consult a physician for specific advice. If medical advice is needed, have product container or label at hand. If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention immediately.
Ingestion	Get medical attention immediately. Do not induce vomiting unless under the direction of medical personnel. Never give anything by mouth to an unconscious person.
Skin Contact	Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing. Wash clothing and clean shoes thoroughly before reuse.
Eye contact	Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

T602K Black Ink

General information	The product is considered to be a low hazard under normal conditions of use. The severity of the symptoms described will vary dependent on the concentration and the length of exposure. See Section 11 for additional information on health hazards.
Inhalation	May be harmful if inhaled. Vapor may affect central nervous system. Vapours may cause drowsiness and dizziness. Vapors irritate the respiratory system.
Ingestion	Harmful if swallowed. May cause nausea, headache, dizziness and intoxication.
Skin contact	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.
Eye contact	This product is moderately irritating. Symptoms following overexposure to vapor may include the following: Severe irritation, burning, tearing and blurred vision.

Indication of immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Water spray.

Special hazards arising from the substance or mixture

Flammability Class 7.1 Flammable Liquid IB.

Specific hazards Flammable liquid and vapour. Vapors are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO₂). Carbon monoxide (CO).

Advice for firefighters

Protective actions during firefighting Evacuate area. Stop leak if safe to do so. Use water to keep fire exposed containers cool and disperse vapors. Use water spray to reduce vapors.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions No smoking, sparks, flames or other sources of ignition near spillage. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapors. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place.

Environmental precautions

Environmental precautions Avoid release to the environment. Do not discharge into drains or watercourses or onto the ground. Use appropriate containment to avoid environmental contamination. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

Methods and material for containment and cleaning up

T602K Black Ink

Methods for cleaning up	Eliminate all sources of ignition. Stop leak if safe to do so. Do not touch or walk into spilled material. Take care as floors and other surfaces may become slippery. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. When handling waste, the safety precautions applying to handling of the product should be considered. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
Reference to other sections	For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions	Wear protective clothing as described in Section 8 of this safety data sheet.
Advice on general occupational hygiene	Do not eat, drink or smoke when using this product. Provide eyewash station and safety shower. Good personal hygiene procedures should be implemented. Wash skin thoroughly after handling. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage precautions	Store at temperatures between 4.4°C/40°F and 32.2°C/90°F. Keep only in the original container in a cool, well-ventilated place. Protect from freezing and direct sunlight. Container must be kept tightly closed when not in use. Keep containers upright. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store in accordance with national regulations.
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Specific end uses(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.
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8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

Ethanol

Long-term exposure limit (8-hour TWA): OSHA 1000 ppm 1900 mg/m³

Short-term exposure limit (15-minute): ACGIH 1000 ppm 1880 mg/m³

Cyclohexanone

Long-term exposure limit (8-hour TWA): ACGIH 20 ppm

Long-term exposure limit (8-hour TWA): OSHA 50 ppm 200 mg/m³

Short-term exposure limit (15-minute): ACGIH 50 ppm

A3, Sk

OSHA = Occupational Safety and Health Administration.

ACGIH = American Conference of Governmental Industrial Hygienists.

A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans.

Sk = Danger of cutaneous absorption.

Ingredient comments	Data based on literature. Product not tested.
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Cyclohexanone (CAS: 108-94-1)

Immediate danger to life and health 700 ppm

Exposure controls

T602K Black Ink

Protective equipment



Appropriate engineering controls

As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist. Use explosion-proof ventilating equipment.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield.

Hand protection

It is recommended that chemical-resistant, impervious gloves are worn. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. It is recommended that gloves are made of the following material: Butyl rubber. Nitrile rubber. Rubber (natural, latex). Frequent changes are recommended.

Other skin and body protection

Avoid contact with skin. Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures

Wash contaminated skin thoroughly after handling. Provide eyewash station and safety shower.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Organic vapor filter.

Thermal hazards

If there is a risk of contact with hot product, all protective equipment worn should be suitable for use with high temperatures.

Environmental exposure controls

Keep container tightly sealed when not in use. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Colored liquid.
Color	Black.
Odor	Alcoholic.
Melting point	-89°C/-128°F
Initial boiling point and range	63°C/147°F @ 760 mm Hg
Flash point	4°C/40°F CC (Closed cup).
Evaporation rate	8.3 (diethyl ether = 1)
Upper/lower flammability or explosive limits	Upper flammable/explosive limit: 19 % vol Lower flammable/explosive limit: 1.4 % vol
Vapor pressure	42.9 mm Hg @ 20°C/68°F
Vapor density	1.5
Relative density	0.84 g/cc
Solubility(ies)	Soluble in the following materials: Alcohols. Soluble in water.
Partition coefficient	log Pow: -0.3
Auto-ignition temperature	398°C/750°F

T602K Black Ink

Decomposition Temperature	Not applicable.
Explosive properties	Not applicable.
Oxidizing properties	Not applicable.
Comments	Information given is applicable to the product as supplied. Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.
Volatile organic compound	No information available.

10. Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable at normal ambient temperatures and when used as recommended.
Possibility of hazardous reactions	The following materials may react with the product: Strong oxidizing agents.
Conditions to avoid	Avoid the following conditions: Heat, sparks, flames.
Materials to avoid	Avoid contact with the following materials: Strong oxidizing agents.
Hazardous decomposition products	Heating may generate the following products: Carbon dioxide (CO ₂). Carbon monoxide (CO).

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 5,543.24

Acute toxicity - dermal

ATE dermal (mg/kg) 12,195.12

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 121.95

Specific target organ toxicity - single exposure

Target organs Eyes Gastro-intestinal tract Respiratory system, lungs Skin

Specific target organ toxicity - repeated exposure

Target organs Blood Central nervous system Gastro-intestinal tract Kidneys Liver Skin

Aspiration hazard

Aspiration hazard Not relevant.

Toxicological information on ingredients.

Ethanol

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 3,450.0

Species Rat

T602K Black Ink

ATE oral (mg/kg) 3,450.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 15,800.0

Species Rabbit

ATE dermal (mg/kg) 15,800.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 30,000.0

Species Rat

ATE inhalation (vapours mg/l) 30,000.0

Serious eye damage/irritation

Serious eye damage/irritation Causes eye irritation.

Carcinogenicity

Carcinogenicity Ethyl alcohol is only considered a carcinogenic and developmental hazard when ingested as an alcoholic beverage.

IARC carcinogenicity IARC Group 1 Carcinogenic to humans.

NTP carcinogenicity Known carcinogen.

OSHA Carcinogenicity Listed as a carcinogen under OSHA

Cyclohexanone

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 1,890.0

Species Rat

ATE oral (mg/kg) 1,890.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 946.0

Species Rabbit

ATE dermal (mg/kg) 946.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 15.0

Species Rat

ATE inhalation (vapours mg/l) 15.0

T602K Black Ink

Skin corrosion/irritation

Skin corrosion/irritation Irritating to skin.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

12. Ecological Information

Ecological information on ingredients.

Ethanol

Acute toxicity - fish LC₅₀, 96 hours: 14,200 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates NOEC, 9 days: 9.6 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 275 mg/l, Freshwater algae

Cyclohexanone

Acute toxicity - fish LC₅₀, 96 hours: >100 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >100 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: >100 mg/l, Desmodesmus subspicatus

Acute toxicity - microorganisms EC₅₀, 30 minutes: >1000 mg/l, Activated sludge

Persistence and degradability

Ecological information on ingredients.

Cyclohexanone

Biodegradation Soil - Degradation 90 - 100: 28 days

Bioaccumulative potential

Partition coefficient log Pow: -0.3

Ecological information on ingredients.

Ethanol

Partition coefficient log Pow: -0.32

Cyclohexanone

Partition coefficient log Pow: 0.81

13. Disposal considerations

Waste treatment methods

T602K Black Ink

General information

The generation of waste should be minimized or avoided wherever possible. When handling waste, the safety precautions applying to handling of the product should be considered. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Dispose of waste product or used containers in accordance with local regulations. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

Disposal methods

Dispose of contents/container in accordance with national regulations. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions. When handling waste, the safety precautions applying to handling of the product should be considered.

14. Transport information

UN Number

UN No. (TDG)	1210
UN No. (IMDG)	1210
UN No. (ICAO)	1210
UN No. (DOT)	1210

UN proper shipping name

Proper shipping name (TDG)	PRINTING INK
Proper shipping name (IMDG)	PRINTING INK
Proper shipping name (ICAO)	PRINTING INK
Proper shipping name (DOT)	PRINTING INK

Transport hazard class(es)

TDG class	3
TDG label(s)	3
IMDG Class	3
ICAO class/division	3

Transport labels



Packing group

TDG Packing Group	II
IMDG packing group	II
ICAO packing group	II
DOT packing group	II

Environmental hazards

Environmentally Hazardous Substance

No.

T602K Black Ink

Special precautions for user

EmS F-E, S-D

15. Regulatory information

Regulatory Status Hazardous Chemical

Regulatory References OSHA Hazard Communication Standard, 29 CFR 1910.1200

US Federal Regulations

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

Cyclohexanone

SARA (311/312) Hazard Categories

Cyclohexanone

US State Regulations

California Directors List of Hazardous Substances

The following ingredients are listed or exempt:

Ethanol

Cyclohexanone

Massachusetts "Right To Know" List

The following ingredients are listed or exempt:

Ethanol

Cyclohexanone

Rhode Island "Right To Know" List

The following ingredients are listed or exempt:

Ethanol

Cyclohexanone

Minnesota "Right To Know" List

The following ingredients are listed or exempt:

Ethanol

Cyclohexanone

New Jersey "Right To Know" List

The following ingredients are listed or exempt:

Ethanol

Cyclohexanone

Pennsylvania "Right To Know" List

The following ingredients are listed or exempt:

Ethanol

Cyclohexanone

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

T602K Black Ink

Canada - DSL/NDSL

All the ingredients are listed or exempt.

US - TSCA

All the ingredients are listed or exempt.

Australia - AICS

Ethanol

Cyclohexanone

Japan - MITI

Ethanol

Cyclohexanone

Korea - KECI

Ethanol

Cyclohexanone

China - IECSC

Ethanol

Cyclohexanone

Philippines - PICCS

Ethanol

Cyclohexanone

16. Other information

Issued by	Matthews Marking Systems - Chemical Services Department
Revision date	3/4/2016
Revision	1
SDS No.	5966
SDS status	Approved.
Hazard statements in full	H225 Highly flammable liquid and vapor. H302 Harmful if swallowed. H312 Harmful in contact with skin. H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation. H332 Harmful if inhaled. H412 Harmful to aquatic life with long lasting effects.
NFPA - instability hazard	Normally stable. (0)
ACA HMIS Health rating.	Moderate hazard. (2)
NFPA - health hazard	Irritation, minor residual injury. (1)
NFPA - flammability hazard	Ignites easily. (3)

T602K Black Ink

ACA HMIS Flammability rating.	Ignites easily. (3)
ACA HMIS Physical hazard rating.	Normally stable. (0)
ACA HMIS Personal protection rating.	B

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.