



Ink Load

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 05/28/2015

Version: 2.0

SECTION 1: Product and Company Identification

1.1. Product identifier

Product name : Ink Load

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Dry cleaning fluids and detergents

1.3. Details of the supplier of the safety data sheet

ROYALTONE, Inc.
7211 N. Harrison Ave.
Shawnee, OK 74804 - USA
T 1-405-878-0537
Royaltone@royaltone.com

1.4. Emergency telephone number

Emergency number : 1-405-878-0577

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS)

Flam. Liq. 4 H227
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Muta. 2 H341
Carc. 1B H350
STOT SE 3 H336

Full text of H-phrases: see section 16

2.2. Label elements

GHS labeling

Hazard pictograms (GHS) :



GHS07

GHS08

Signal word (GHS) :

Danger

Hazard statements (GHS) :

H227 - Combustible liquid
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H341 - Suspected of causing genetic defects
H350 - May cause cancer

Precautionary statements (GHS) :

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from open flames, sparks. - No smoking
P261 - Avoid breathing mist, spray
P264 - Wash hands thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear eye protection, protective clothing, protective gloves
P302+P352 - If on skin: Wash with plenty of soap, water
P332+P313 - If skin irritation occurs: Get medical advice/attention
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P312 - Call a doctor if you feel unwell
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 - If eye irritation persists: Get medical advice/attention
P308+P313 - If exposed or concerned: Get medical advice/attention

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P362 - Take off contaminated clothing and wash before reuse
P370+P378 - In case of fire: Use Foam, powder, carbon dioxide (CO₂), water spray to extinguish
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

No additional information available

SECTION 3: Composition/information on ingredients

Component	CAS (Chemical Abstracts Service) number	%	Classification (GHS)
Trichloroethylene	79-01-6	20 - 30	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H336
Ethylene glycol butyl ether	111-76-2	10 - 20	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319
Hydrocarbon solvent*		10 - 20	Flam. Liq. 3, H226 Asp. Tox. 1, H304
Surfactant*		< 10	Eye Irrit. 2A, H319
n-amyl acetate	628-63-7	< 10	Flam. Liq. 3, H226

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.

First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May cause drowsiness or dizziness.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustible liquid.

Explosion hazard : May form flammable/explosive vapor-air mixture.

Reactivity : Stable : Not reactive when mixed with water.

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5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection. Avoid breathing Vapors.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable. Keep away from flames or sparks. - No smoking.
- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No naked lights. No smoking. Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood. Avoid breathing spray, mist, vapors. Use only outdoors or in a well-ventilated area.
- Hygiene measures : Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Sources of ignition, Direct sunlight. Keep in fireproof place. Keep container tightly closed.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.
- Storage temperature : 5 - 35 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ink Load	
ACGIH	Not applicable
OSHA	Not applicable
Surfactant	
ACGIH	Not applicable
OSHA	Not applicable

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Trichloroethylene (79-01-6)		
ACGIH	ACGIH TWA (ppm)	10 ppm
ACGIH	ACGIH STEL (ppm)	25 ppm
ACGIH	Remark (ACGIH)	CNS impair; cognitive decrements
OSHA	Remark (OSHA)	(2) See Table Z-2.
n-amyl acetate (628-63-7)		
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	ACGIH STEL (ppm)	50 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	525 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	100 ppm
Hydrocarbon solvent		
ACGIH	Not applicable	
OSHA	Not applicable	
Ethylene glycol butyl ether (111-76-2)		
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	Remark (ACGIH)	Eye & URT irr
OSHA	OSHA PEL (TWA) (mg/m ³)	240 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	50 ppm

8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles or safety glasses.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.
Other information	: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Light yellow
Odor	: Characteristic
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: < 0 °C
Boiling point	: 95 °C
Flash point	: 60.5 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: < 20 mg HG @ 25 °C
Relative vapor density at 20 °C	: > 1 (air = 1)
Relative density	: 1.02
Specific gravity / density	: 1.026 g/ml @ 25 °C

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Solubility	: Moderately soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 1.1 - 7.5 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable : Not reactive when mixed with water.

10.2. Chemical stability

Combustible liquid. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Fumes. Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Trichloroethylene (79-01-6)	
LD50 oral rat	4920 mg/kg (Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	66 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	12000 ppm/4h (Rat)
ATE US (oral)	4920.000 mg/kg body weight
ATE US (gases)	12000.000 ppmV/4h
ATE US (vapors)	66.000 mg/l/4h
ATE US (dust, mist)	66.000 mg/l/4h
n-amyl acetate (628-63-7)	
LD50 oral rat	6500 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
ATE US (oral)	6500.000 mg/kg body weight
Hydrocarbon solvent	
LD50 oral rat	> 2000 mg/kg (Rat)
Ethylene glycol butyl ether (111-76-2)	
LD50 oral rat	470 mg/kg
LC50 inhalation rat (ppm)	450 ppm/4h
ATE US (oral)	470.000 mg/kg body weight
ATE US (dermal)	1100.000 mg/kg body weight
ATE US (gases)	450.000 ppmV/4h
ATE US (dust, mist)	1.500 mg/l/4h

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Trichloroethylene (79-01-6)	
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Suspected of causing genetic defects.
Carcinogenicity	: May cause cancer.

Trichloroethylene (79-01-6)	
IARC group	2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen

Ethylene glycol butyl ether (111-76-2)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: May cause drowsiness or dizziness.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Trichloroethylene (79-01-6)	
LC50 fish 1	40.7 mg/l (96 h; Pimephales promelas)
LC50 other aquatic organisms 1	20 mg/l (48 h; Plankton)
EC50 Daphnia 1	39 - 51 mg/l (48 h; Daphnia pulex; Static system)
LC50 fish 2	45 mg/l (96 h; Lepomis macrochirus)
EC50 Daphnia 2	20.8 mg/l (48 h; Daphnia magna)
TLM fish 1	100 - 1000,96 h; Pisces
TLM other aquatic organisms 1	100 - 1000,96 h
Threshold limit other aquatic organisms 1	20 mg/l (48 h; Plankton)
Threshold limit algae 1	> 100 mg/l (Scenedesmus quadricauda)
Threshold limit algae 2	63 mg/l (Microcystis aeruginosa)
n-amyl acetate (628-63-7)	
LC50 fish 1	650 ppm (96 h; Lepomis macrochirus)
LC50 other aquatic organisms 1	10 - 100 mg/l (96 h)
EC50 Daphnia 1	180 mg/l (Daphnia magna; Nocivity test)
EC50 other aquatic organisms 1	120 mg/l (Algae; Nocivity test)
LC50 fish 2	10 ppm (96 h; Carassius auratus)
TLM fish 1	65 mg/l (96 h; Gambusia affinis)
TLM fish 2	10 ppm (96 h; Carassius auratus)
Threshold limit other aquatic organisms 1	10 - 100,96 h; Protozoa; Toxicity test
Threshold limit other aquatic organisms 2	226 mg/l (72 h)
Threshold limit algae 1	80 mg/l (168 h; Scenedesmus quadricauda; Toxicity test)
Threshold limit algae 2	63 mg/l (192 h; Microcystis aeruginosa; Toxicity test)
Ethylene glycol butyl ether (111-76-2)	
LC50 fish 1	220 mg/l

12.2. Persistence and degradability

Ink Load	
Persistence and degradability	Not established.

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Trichloroethylene (79-01-6)	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Biodegradable in the soil under anaerobic conditions.
n-amyl acetate (628-63-7)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.31 g O ₂ /g substance
ThOD	2.34 g O ₂ /g substance
BOD (% of ThOD)	(20 day(s)) 0.72
Hydrocarbon solvent	
Persistence and degradability	Biodegradability in water: no data available.

12.3. Bioaccumulative potential

Ink Load	
Bioaccumulative potential	Not established.
Trichloroethylene (79-01-6)	
BCF fish 1	17 (336 h; Lepomis macrochirus)
BCF fish 2	90 (72 h; Leuciscus idus; Fresh water)
BCF other aquatic organisms 1	3440 (120 h; Selenastrum capricornutum)
BCF other aquatic organisms 2	4270 (120 h; Scenedesmus quadricauda)
Log Pow	2.29 - 2.42 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
n-amyl acetate (628-63-7)	
BCF fish 1	31.0 (QSAR)
Log Pow	2.3
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Hydrocarbon solvent	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

Trichloroethylene (79-01-6)	
Surface tension	0.03 N/m
n-amyl acetate (628-63-7)	
Surface tension	0.012 N/m (30 °C)

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to an approved waste disposal plant.

Additional information : Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with US Dept. of Transportation (DOT)

Transport document description : UN1710 Trichloroethylene mixture, 6.1, III

UN-No.(DOT) : UN1710

Proper Shipping Name (DOT) : Trichloroethylene mixture

Department of Transportation (DOT) Hazard Classes : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132

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Hazard labels (DOT) : 6.1 - Poison inhalation hazard



Packing group (DOT) : III - Minor Danger

DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). 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, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

N36 - Aluminum or aluminum alloy construction materials are permitted only for halogenated hydrocarbons that will not react with aluminum.

T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 153

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

Additional information

Other information : Limited Quantity Shipping:
When shipped by ground transport in inner packagings not over 4.0 L (1 gallon) net capacity, this product may be shipped under the US Dept. of Transportation (DOT) 'Limited Quantity Exception' per 49CFR§172.315.
Hazard label (DOT): LTD QTY - Limited quantity



SECTION 15: Regulatory information

15.1. US Federal regulations

Ink Load	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Fire hazard Immediate (acute) health hazard

All components of this product are listed on the Toxic Substances Control Act (TSCA) inventory

Trichloroethylene (79-01-6)	
Listed on United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	100 lb
n-amyl acetate (628-63-7)	
Not listed on the United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb

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15.3. US State regulations

Trichloroethylene (79-01-6)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	14
Trichloroethylene (79-01-6)				
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List				
n-amyl acetate (628-63-7)				
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List				
Ethylene glycol butyl ether (111-76-2)				
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List				

SECTION 16: Other information

Full text of H-phrases:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1B	Carcinogenicity Category 1B
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
Flam. Liq. 3	Flammable liquids Category 3
Flam. Liq. 4	Flammable liquids Category 4
Muta. 2	Germ cell mutagenicity Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H226	Flammable liquid and vapor
H227	Combustible liquid
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H320	Causes eye irritation
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H341	Suspected of causing genetic defects
H350	May cause cancer

HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 2 Moderate Hazard

Physical : 0 Minimal Hazard

Personal protection : H

Royaltone SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product