

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Marking Ink
Product group : Trade product

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

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Printing ink
Function or use : Printer cartridge

Title	Life cycle stage	Use descriptors
Marking Ink	Professional	SU0, PC18, PROC1

Full text of use descriptors: see section 16

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Rize Inc.
4C Gill St.
Woburn, MA 01801 - USA
T (001) 978 699 3085
info@rize3d.com - www.rize3d.com

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP] Mixtures/Substances: SDS EU 2015: According to Regulation (EU) 2015/830 (REACH Annex II)

Aspiration hazard, Category 1 H304

Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

May be fatal if swallowed and enters airways. Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS08

Signal word (CLP) :

Danger

Hazardous ingredients :

White mineral oil (petroleum); Solvent naphtha (petroleum), heavy arom.

Hazard statements (CLP) :

H304 - May be fatal if swallowed and enters airways.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P273 - Avoid release to the environment.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P405 - Store locked up.
P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Other hazards not contributing to the classification : Prolonged or repeated contact may cause skin to become dry. May cause skin irritation.

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments : Under normal conditions of use, the ink is released from the cartridge only inside the printer, therefore exposure is limited.

Name	Product identifier	% w/w (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
White mineral oil (petroleum)	(CAS-No.) 8042-47-5 (EC-No.) 232-455-8 (REACH-no) 01-2119487078-27	>= 75	Asp. Tox. 1, H304
Solvent naphtha (petroleum), heavy arom.	(CAS-No.) 64742-94-5 (EC-No.) 265-198-5 (EC Index-No.) 649-424-00-3	1 - 3	STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention. If medical advice is needed, have product container or label at hand.
First-aid measures after inhalation	: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER/doctor. Keep person warm, if necessary give mouth-to-mouth resuscitation using barrier, or artificial respiration. Respiratory arrest: artificial respiration or oxygen. Loosen tight clothing such as a collar, tie, belt or waistband.
First-aid measures after skin contact	: Wash skin with mild soap and water. Take off immediately all contaminated clothing. Wash clothing before re-using. In all cases of doubt, or when symptoms persist, seek medical attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water, also under the eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention if ill effect or irritation develops.
First-aid measures after ingestion	: Immediately call a POISON CENTER/doctor. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Do not induce vomiting/risk of damage to lungs exceeds poisoning risk. Never give anything by mouth to an unconscious person. Remove victim to fresh air. In case of loss of conscience place the victim in the recovery position. Loosen tight clothing such as a collar, tie, belt or waistband.

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

Symptoms/effects after skin contact	: Prolonged or repeated contact may cause skin to become dry. May cause skin irritation.
Symptoms/effects after ingestion	: Risk of lung oedema.

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

Treat symptomatically. Symptoms of respiratory complications (lung oedema) may occur several hours after.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Alcohol-resistant foam. Dry powder. Making extinguishing agents environment-friendly.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Reactivity in case of fire	: Combustion produces irritating gases. pressure rise and possible bursting of container.
Hazardous decomposition products in case of fire	: Carbon dioxide (CO ₂). Carbon monoxide.

5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Wear personal protective equipment. Keep public away from danger area. Ensure adequate air ventilation. Avoid breathing dust, mist or spray. Avoid contact with skin and eyes. Take off contaminated clothing and wash before reuse. Keep away from sources of ignition. Do not eat, drink or smoke during use.
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6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area. Consider evacuation.
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6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Do not allow to enter drains or water courses. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). Store away from other materials.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide sufficient air exchange and/or exhaust. Avoid contact with skin, eyes and clothing. Keep out of the reach of children.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in the original unopened package until ready to use. . Keep only in the original container in a cool, well-ventilated place. Containers which are opened should be properly resealed and kept upright to prevent leakage.

Storage temperature : 15 - 30 °C (recommended)

7.3. Specific end use(s)

No supplementary information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Local exhaust. No breathing protection necessary when used as intended in the printer.

Hand protection:

None required when used as intended in Rize printer. Personal precautions in case of spillage or leakage: Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): e.g. nitrile rubber (≥ 0.4 mm), butyl rubber (≥ 0.7 mm) and others. 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 through 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

Eye protection:

None required when used as intended in Rize printer. Personal precautions in case of spillage or leakage: Use eye protection according to EN 166, designed to protect liquid splashes

Skin and body protection:

None required when used as intended in Rize printer. Personal precautions in case of spillage or leakage: Wear suitable protective clothing. Standard. EN 13034

Respiratory protection:

None required when used as intended in Rize printer. Provide adequate ventilation

Environmental exposure controls:

Avoid release to the environment.

Other information:

If on skin, take off contaminated clothing. Keep away from food, drink and animal feedingstuffs. Avoid contact with skin and eyes. Wash hands before breaks and after work.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Blue.

Odour : aromatic.

Odour threshold : No data available

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pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 218 °C
Flash point	: > 95 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Insoluble in water.
Log Pow	: No data available
Viscosity, kinematic	: < 20,5 mm ² /s
Viscosity, dynamic	: 17 cP
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 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 in use and storage conditions as recommended in item 7.

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

High temperature. Direct sunlight.

10.5. Incompatible materials

No additional information available.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

White mineral oil (petroleum) (8042-47-5)

LD50 oral rat	5000 mg/kg bodyweight
LD50 dermal rabbit	2000 mg/kg
LC50 inhalation rat (mg/l)	5 mg/l/4h

Solvent naphtha (petroleum), heavy arom. (64742-94-5)

LD50 oral rat	2000 - 5000 mg/kg
LD50 dermal rat	2000 mg/kg
LC50 inhalation rat (mg/l)	2,7 - 30000 mg/m ³

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified

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STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: May be fatal if swallowed and enters airways.

Marking Ink

Viscosity, kinematic	< 20,5 mm ² /s
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Harmful to aquatic life with long lasting effects.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Harmful to aquatic life with long lasting effects.

White mineral oil (petroleum) (8042-47-5)

LC50 fishes	100 - 10000 mg/l
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Solvent naphtha (petroleum), heavy arom. (64742-94-5)

LC50 fishes	41 mg/l Pimephales promelas (Pimephales promelas (fathead minnow))
EC50 Daphnia	0,95 mg/l EC50 48h - Daphnia magna [mg/l]
EC50 72h algae (1)	2,5 mg/l Skeletonema costatum

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Solvent naphtha (petroleum), heavy arom. (64742-94-5)

Log Pow	2,9 - 6,1
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.
European List of Waste (LoW) code	: 08 00 00 - WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS 08 03 12* - waste ink containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

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No supplementary information available

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	Solvent naphtha (petroleum), heavy arom.
3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	Marking Ink - White mineral oil (petroleum) - Solvent naphtha (petroleum), heavy arom.
3(c) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1	Marking Ink - Solvent naphtha (petroleum), heavy arom.

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the substance or the mixture by the supplier

SECTION 16: Other information

Indication of changes:

Section	Changed item	Change	Comments
	Supersedes	Added	
	Revision date	Added	
6.1	Emergency procedures	Modified	
7.2	Storage conditions	Modified	
8.2	Appropriate engineering controls	Modified	

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DNEL	Derived-No Effect Level
EC50	Median effective concentration
LC50	Median lethal concentration

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LD50	Median lethal dose
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
STP	Sewage treatment plant
vPvB	Very Persistent and Very Bioaccumulative

Data sources : ECHA (European Chemicals Agency). Manufacturer/Supplier.

Other information : **DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H- and EUH-statements:		
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2	
Asp. Tox. 1	Aspiration hazard, Category 1	
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis	
H304	May be fatal if swallowed and enters airways.	
H336	May cause drowsiness or dizziness.	
H411	Toxic to aquatic life with long lasting effects.	
H412	Harmful to aquatic life with long lasting effects.	
Full text of use descriptors		
PC18	Ink and Toners	
PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions	
SU0	Other	
Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Asp. Tox. 1	H304	Calculation method
Aquatic Chronic 3	H412	Calculation method

SDS EU (REACH Annex II)

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