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MATERIAL SAFETY DATA SHEET

Edition: Aug 2015

NAZDAR® Ink Technologies

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product code	**LPGCANBRANC**
Product name	**Print Guard Aerosol**
Product category	**Ink Product**

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

Recommended use Printing operations

1.3 Details of the supplier of the safety data sheet

UNITED STATES
Nazdar Company
8501 Hedge Lane Terrace
Shawnee, KS 66227
Tel: 1-913-422-1888
Tel: 1-800-677-4657
Fax: 1-913-422-2294

UNITED KINGDOM
Nazdar Limited
Barton Road
Heaton Mersey
Stockport, England SK4 3EG
Tel: +44 161 442 2111

For further information, please contact

Contact person Regulatory Compliance: Tel: 1-913-422-1888 (ext 2305)
E-mail address regcomp@nazdar.com

1.4 Emergency telephone number

USA: Chemtrec: 1-800-424-9300
Outside USA: Chemtrec: 1-703-527-3887
24 Hour Emergency Phone Number

Section 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

According to Regulation (EC) No 1272/2008

Serious eye damage/eye irritation	Category 2 - (H319)
Specific target organ toxicity (single exposure)	Category 3 - (H336)
Flammable aerosols	Category 1 - (H222)

2.2 Label elements

Signal Word
Danger

Hazard Statements

H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H222 - Extremely flammable aerosol
H229 - Pressurized container: May burst if heated

Precautionary Statements - EU (§28, 1272/2008)

P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

2.3 Other Hazards

General Hazards No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Component	EC No.	CAS-No	Weight %	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH No.	Note
Dimethyl ether	204-065-8	115-10-6	30 - 60	Press. Gas (H280) Flam. Gas 1 (H220)	No data available	1
Isopropyl alcohol	200-661-7	67-63-0	30 - 60	Flam. Liq. 2 (H225) STOT SE 3 (H336) Eye Irrit. 2 (H319)	No data available	1
n-Butyl acetate	204-658-1	123-86-4	1 - 5	(EUH066) Flam. Liq. 3 (H226) STOT SE 3 (H336)	No data available	1

Note
1. Substance with a Community workplace exposure limit

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Advice	Show this safety data sheet to the doctor in attendance.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.
Skin Contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.
Inhalation	Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

None under normal use conditions.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media

Foam. Carbon dioxide (CO2). Dry chemical. Water fog. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Pressurized container: May burst if heated. Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

6.4 Reference to other sections

See Section 12 for more information.

Section 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Pressurized container: Do not pierce or burn, even after use. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Keep out of the reach of children.

7.3 Specific end use(s)

Exposure Scenario	No information available.
Risk Management Methods (RMM)	The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limits

Component	The United Kingdom
Dimethyl ether 115-10-6	STEL: 500 ppm STEL: 958 mg/m³ TWA: 400 ppm TWA: 766 mg/m³
Isopropyl alcohol 67-63-0	STEL: 500 ppm STEL: 1250 mg/m³ TWA: 400 ppm TWA: 999 mg/m³

Component	France
Dimethyl ether 115-10-6	TWA/VME: 1000 ppm indicative limit TWA/VME: 1920 mg/m³ indicative limit
Isopropyl alcohol	STEL/VLCT: 400 ppm
67-63-0	STEL/VLCT: 980 mg/m³
n-Butyl acetate 123-86-4	TWA/VME: 150 ppm TWA/VME: 710 mg/m³ STEL/VLCT: 200 ppm STEL/VLCT: 940 mg/m³

Component	Germany
Dimethyl ether 115-10-6	TWA/MAK: 1000 ppm TWA/MAK: 1900 mg/m³ Peak: 8000 ppm Peak: 15200 mg/m³ TWA/AGW: 1000 ppm TWA/AGW: 1900 mg/m³
Isopropyl alcohol 67-63-0	TWA/MAK: 200 ppm TWA/MAK: 500 mg/m³ Peak: 400 ppm Peak: 1000 mg/m³ TWA/AGW: 200 ppm TWA/AGW: 500 mg/m³
n-Butyl acetate 123-86-4	TWA/MAK: 100 ppm TWA/MAK: 480 mg/m³ Peak: 200 ppm Peak: 960 mg/m³

Component	Spain
Dimethyl ether 115-10-6	TWA/VLA-ED: 1000 ppm TWA/VLA-ED: 1920 mg/m³
Isopropyl alcohol 67-63-0	STEL/VLA-EC: 400 ppm STEL/VLA-EC: 1000 mg/m³ TWA/VLA-ED: 200 ppm TWA/VLA-ED: 500 mg/m³
n-Butyl acetate 123-86-4	STEL/VLA-EC: 200 ppm STEL/VLA-EC: 965 mg/m³ TWA/VLA-ED: 150 ppm TWA/VLA-ED: 724 mg/m³

Component	Italy
Dimethyl ether 115-10-6	TWA: 1000 ppm TWA: 1920 mg/m³

Component	Portugal
Isopropyl alcohol 67-63-0	STEL/VLE-CD: 400 ppm TWA/VLE-MP: 200 ppm
n-Butyl acetate 123-86-4	STEL/VLE-CD: 200 ppm TWA/VLE-MP: 150 ppm

Component	The Netherlands
Dimethyl ether 115-10-6	STEL: 1500 mg/m³ TWA: 950 mg/m³

Component	Finland
Dimethyl ether 115-10-6	TWA: 1000 ppm TWA: 2000 mg/m³
Isopropyl alcohol 67-63-0	TWA: 200 ppm TWA: 500 mg/m³ STEL: 250 ppm STEL: 620 mg/m³
n-Butyl acetate 123-86-4	TWA: 150 ppm TWA: 720 mg/m³ STEL: 200 ppm STEL: 960 mg/m³

Component	Denmark
Dimethyl ether 115-10-6	TWA: 1000 ppm TWA: 1885 mg/m³
Isopropyl alcohol 67-63-0	TWA: 200 ppm TWA: 490 mg/m³
n-Butyl acetate	TWA: 150 ppm

123-86-4	TWA: 710 mg/m³

Component	Austria
Dimethyl ether 115-10-6	STEL/KZW: 2000 ppm STEL/KZW: 3820 mg/m³ TWA/TMW: 1000 ppm TWA/TMW: 1910 mg/m³
Isopropyl alcohol 67-63-0	STEL/KZW: 800 ppm STEL/KZW: 2000 mg/m³ STEL/KZW: 800 ppm par STEL/KZW: 2000 mg/m³ TWA/TMW: 200 ppm TWA/TMW: 500 mg/m³
n-Butyl acetate 123-86-4	STEL/KZW: 100 ppm STEL/KZW: 480 mg/m³ TWA/TMW: 100 ppm TWA/TMW: 480 mg/m³

Component	Switzerland
Dimethyl ether 115-10-6	TWA/MAK: 1000 ppm TWA/MAK: 1910 mg/m³
Isopropyl alcohol 67-63-0	STEL/KZW: 400 ppm STEL/KZW: 1000 mg/m³ TWA/MAK: 200 ppm TWA/MAK: 500 mg/m³
n-Butyl acetate 123-86-4	STEL/KZW: 200 ppm STEL/KZW: 960 mg/m³ TWA/MAK: 100 ppm TWA/MAK: 480 mg/m³

Component	Poland
Dimethyl ether 115-10-6	TWA/NDS: 1000 mg/m³
Isopropyl alcohol 67-63-0	NDSCh: 1200 mg/m³ TWA/NDS: 900 mg/m³ Skin

Component	Norway
Dimethyl ether 115-10-6	TWA: 200 ppm TWA: 384 mg/m³
Isopropyl alcohol 67-63-0	TWA: 100 ppm TWA: 245 mg/m³

Component	Ireland
Dimethyl ether 115-10-6	TWA: 1000 ppm TWA: 1920 mg/m³
Isopropyl alcohol 67-63-0	TWA: 200 ppm STEL: 400 ppm Skin

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2 Exposure controls

Engineering Measures Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed

by a powered fan. Users are advised to consider national Occupational Expo sure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal protective equipment

Eye/face Protection	Wear safety glasses with side shields (or goggles). If splashes are likely to occur:. Wear suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye Protection	Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield
Skin Protection	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Respiratory Protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.
Environmental exposure controls	No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Aerosol	**Appearance**	Colourless
Odor	Characteristic	**Odor Threshold**	No information available

Property	Values	Remarks - Method
Ph		No data available
Melting point/freezing point		No data available
Boiling point/Boiling Range	> -25 °C / -13 °F	
Flash Point	-41 °C / -42 °F	No data available
Evaporation rate		No data available
Flammability Limit in Air		
Upper flammability limit		No data available
Lower flammability limit		No data available
Vapor Pressure		No data available
Vapor Density		No data available
Specific Gravity	0.72	
Water Solubility		No data available
Solubility in other solvents		No data available
Partition coefficient: n-octanol/water		No data available
Autoignition Temperature	350°C (235°C, BAM, DIN 51 794)	No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available
Explosive Properties	No data available	
Oxidizing Properties	No data available	

9.2 Other information

Softening Point	No data available

Section 10: STABILITY AND REACTIVITY

10.1 Reactivity

No information available.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of Hazardous Reactions

None under normal processing.

10.4 Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

10.6 Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO2). Carbon monoxide.

Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Inhalation	There is no data for this product.
Eye Contact	There is no data for this product.
Skin Contact	There is no data for this product.
Ingestion	There is no data for this product.

Unknown Acute Toxicity 54.9 % of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	4,845.00 mg/kg
ATEmix (dermal)	13,961.00 mg/kg
ATEmix (inhalation-dust/mist)	78.70 mg/L

Unknown Acute Toxicity

54.9 % of the mixture consists of ingredient(s) of unknown toxicity.

53.5 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

53.5 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

54.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

Component	Oral LD50
Isopropyl alcohol 67-63-0	4396 mg/kg (Rat)
n-Butyl acetate 123-86-4	10768 mg/kg (Rat)

Component	LD50 Dermal
Isopropyl alcohol 67-63-0	12870 mg/kg (Rabbit) 12800 mg/kg (Rat)
n-Butyl acetate 123-86-4	>17600 mg/kg (Rabbit)

Component	Inhalation LC50
Dimethyl ether 115-10-6	308.5 mg/L (Rat) 4 h
Isopropyl alcohol 67-63-0	72.6 mg/L (Rat) 4 h
n-Butyl acetate 123-86-4	390 ppm (Rat) 4 h

Skin corrosion/irritation	There is no data for this product.
Eye damage/irritation	There is no data for this product.
Sensitisation	There is no data for this product.
Mutagenic Effects	There is no data for this product.
Carcinogenic effects	There is no data for this product.
Reproductive Effects	There is no data for this product.
STOT - single exposure	There is no data for this product.
STOT - repeated exposure	There is no data for this product.
Aspiration hazard	There is no data for this product.

Section 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Component	Algae/aquatic plants
Isopropyl alcohol 67-63-0	72h EC50 Desmodesmus subspicatus: >1000 mg/L 96h EC50 Desmodesmus subspicatus: >1000 mg/L
n-Butyl acetate 123-86-4	72h EC50 Desmodesmus subspicatus: 674.7 mg/L

Component	Fish
Isopropyl alcohol 67-63-0	96h LC50 Pimephales promelas: 11130 mg/L [static] 96h LC50 Pimephales promelas: 9640 mg/L [flow-through] 96h LC50 Lepomis macrochirus: >1400000 µg/L
n-Butyl acetate 123-86-4	96h LC50 Pimephales promelas: 17 - 19 mg/L [flow-through] 96h LC50 Lepomis macrochirus: 100 mg/L [static] 96h LC50 Leuciscus idus: 62 mg/L [static]

Component	Crustacea
Isopropyl alcohol 67-63-0	48h EC50 Daphnia magna: 13299 mg/L
n-Butyl acetate 123-86-4	24h EC50 Daphnia magna: 72.8 mg/L

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

Component	Partition coefficient
Dimethyl ether 115-10-6	-0.18
Isopropyl alcohol 67-63-0	0.05
n-Butyl acetate 123-86-4	1.81

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects.

No information available.

Section 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from Residues / Unused Products	Contain and dispose of waste according to local regulations.
Contaminated Packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Pressurized container: Do not pierce or burn, even after use.

Section 14: TRANSPORT INFORMATION

14.1 UN/ID no. UN1950
14.2 Proper Shipping Name Aerosols, flammable
14.3 Hazard Class 2.1

ICAO / IATA / IMDG / IMO

ICAO

14.1 UN/ID no. UN1950
14.2 Proper Shipping Name Aerosols, flammable
14.3 Hazard Class 2.1

IATA

UN/ID no. UN1950
Proper Shipping Name Aerosols, flammable
Hazard Class 2.1

IMDG/IMO

UN/ID no. UN1950
Proper Shipping Name Aerosols
Hazard Class 2.1

Section 15: REGULATORY INFORMATION

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

European Union

International Inventories

For further information, please contact: Supplier (manufacturer/importer/downstream user/distributor)

15.2 Chemical Safety Assessment

No information available.

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under sections 2 and 3

H226 - Flammable liquid and vapor
H336 - May cause drowsiness or dizziness
H225 - Highly flammable liquid and vapor
H319 - Causes serious eye irritation
EUH066 - Repeated exposure may cause skin dryness or cracking

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value

Revision Date Aug-20-2015

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of Safety Data Sheet