



SAFETY DATA SHEET
IR-291BK PRINTING INK

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

Product name IR-291BK PRINTING INK

Product number IR-291BK

Recommended use of the chemical and restrictions on use

Application Printing ink.

Details of the supplier of the safety data sheet

Supplier Domino Amjet Inc
1290 Lakeside Drive
Gurnee, Illinois 60031
Tel: +1 847 244 2501
Fax: +1 847 244 1421
Email: msds@domino-uk.com

Emergency telephone number

Emergency telephone For MEDICAL emergencies call:
International Poison Control Center, USA
1-800-228-5635 (24 Hours)
+1 612-851-8180 (24 hours, International)

For TRANSPORTATION emergencies call:
CHEMTREC 1-800-424-9300 (US Calls)
+1 703-527-3887 (International calls)

National emergency telephone number 911

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Flam. Liq. 2 - H225

Health hazards Eye Irrit. 2 - H319 STOT SE 3 - H336

Environmental hazards Aquatic Chronic 3 - H412

Human health See Section 11 for additional information on health hazards.

Environmental The product contains a substance which may cause long-term adverse effects in the aquatic environment.

Physicochemical Vapors are heavier than air and may travel along the floor and accumulate in the bottom of containers.

Label elements

IR-291BK PRINTING INK**Pictogram****Signal word**

Danger

Hazard statements

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.

P243 Take precautionary measures against static discharge.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with national regulations.

Contains

BUTANONE

WHMIS Label

Flammable Liquid. Materials Causing Other Toxic Effects.

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients**Mixtures****BUTANONE****50-70%**

CAS number: 78-93-3

Classification

Flam. Liq. 2 - H225

Eye Irrit. 2 - H319

STOT SE 3 - H336

ETHANOL**10-30%**

CAS number: 64-17-5

Classification

Flam. Liq. 2 - H225

C.I. SOLVENT BLACK 29**5-9.9%**

CAS number: 61901-87-9

Classification

Aquatic Chronic 2 - H411

IR-291BK PRINTING INK**2-METHYLPROPAN-2-OL****<1%**

CAS number: 75-65-0

Classification

Flam. Liq. 2 - H225

Acute Tox. 4 - H332

Eye Irrit. 2A - H319

STOT SE 3 - H335

The Full Text for all Hazard Statements are Displayed in Section 16.

Composition comments The product contains organic solvents.**4. First-aid measures****Description of first aid measures**

General information	Keep affected person away from heat, sparks and flames.
Inhalation	Move affected person to fresh air at once. If breathing stops, provide artificial respiration. Keep affected person warm and at rest. Get medical attention immediately.
Ingestion	Never give anything by mouth to an unconscious person. Do not induce vomiting. Do not induce vomiting. Get medical attention immediately.
Skin Contact	Remove affected person from source of contamination. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention immediately.

Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Vapors may cause headache, fatigue, dizziness and nausea.
Ingestion	May cause nausea, headache, dizziness and intoxication.
Skin contact	Prolonged contact may cause redness, irritation and dry skin.
Eye contact	May cause severe eye irritation.

Indication of immediate medical attention and special treatment needed**Notes for the doctor** No specific recommendations. If in doubt, get medical attention promptly.**5. Fire-fighting measures****Extinguishing media****Suitable extinguishing media** Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. Water spray.**Special hazards arising from the substance or mixture****Specific hazards** Fire creates: Toxic gases/vapors/fumes of: Carbon monoxide (CO), Carbon dioxide (CO2). Take precautionary measures against static discharges.**Hazardous combustion products** Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.**Advice for firefighters**

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Protective actions during firefighting

Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities. Use water to keep fire exposed containers cool and disperse vapors. Move containers from fire area if it can be done without risk.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Wear protective clothing as described in Section 8 of this safety data sheet.

Environmental precautions**Environmental precautions**

Do not discharge into drains or watercourses or onto the ground.

Methods and material for containment and cleaning up**Methods for cleaning up**

Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Avoid the spillage or runoff entering drains, sewers or watercourses. Small Spillages: Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Large Spillages: Absorb in vermiculite, dry sand or earth and place into containers. Dispose of waste via a licensed waste disposal contractor. Inform authorities if large amounts are involved.

Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. See Section 11 for additional information on health hazards. For waste disposal, see section 13.

7. Handling and storage**Precautions for safe handling****Usage precautions**

Keep away from heat, sparks and open flame. Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation. Avoid inhalation of vapors. Use approved respirator if air contamination is above an acceptable level. Vapors may accumulate on the floor and in low-lying areas. Static electricity and formation of sparks must be prevented.

Conditions for safe storage, including any incompatibilities**Storage precautions**

Keep away from oxidizing materials, heat and flames. Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep only in the original container.

Storage class

Flammable liquid storage.

Specific end uses(s)**Specific end use(s)**

The identified uses for this product are detailed in Section 1.2.

8. Exposure Controls/personal protection**Control parameters****Occupational exposure limits****BUTANONE**

Long-term exposure limit (8-hour TWA): ACGIH 200 ppm 590 mg/m³

Short-term exposure limit (15-minute): ACGIH 300 ppm 885 mg/m³

Long-term exposure limit (8-hour TWA): OSHA 200 ppm 590 mg/m³

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

A3

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2-METHYLPROPAN-2-OL

Long-term exposure limit (8-hour TWA): OSHA 100 ppm 300 mg/m³

Long-term exposure limit (8-hour TWA): ACGIH 100 ppm 303 mg/m³

A4

ACGIH = American Conference of Governmental Industrial Hygienists.

OSHA = Occupational Safety and Health Administration.

A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans.

A4 = Not Classifiable as a Human Carcinogen.

Exposure controls

Protective equipment



Appropriate engineering controls

All handling should only take place in well-ventilated areas. 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.

Eye/face protection

Wear chemical splash goggles.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station..Do not smoke in work area. Wash promptly if skin becomes contaminated. When using do not eat, drink or smoke. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes wet or contaminated. Use appropriate hand lotion to prevent defatting and cracking of skin.

Respiratory protection

No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

Environmental exposure controls

Keep container tightly sealed when not in use.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Liquid.
Color	Black.
Odor	Ketonic.
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Initial boiling point and range	~75-85°C @°C @ 760 mm Hg
Flash point	-6°C CC (Closed cup).
Evaporation rate	Not available.

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Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not available.
Vapour density	>1
Relative density	0.859 @ @ 20°C
Solubility(ies)	Slightly soluble in water. Soluble in the following materials: Organic solvents.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	3.75-4.25 cP @ 25°C
Other information	Not determined.
Molecular weight	Not available.

10. Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable at normal ambient temperatures.
Possibility of hazardous reactions	Not available.
Conditions to avoid	Avoid contact with strong oxidizing agents.
Materials to avoid	Strong oxidizing agents.
Hazardous decomposition products	Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO2).

11. Toxicological information**Information on toxicological effects**

Toxicological effects Not available.

Acute toxicity - oral

Notes (oral LD₅₀) Not available.

Acute toxicity - dermal

Notes (dermal LD₅₀) Not available.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Not available.

Germ cell mutagenicity

Genotoxicity - in vitro Not available.

Carcinogenicity

Carcinogenicity Not available.

IR-291BK PRINTING INK**Reproductive toxicity****Reproductive toxicity - fertility** Not available.**Reproductive toxicity - development** Not available.**Specific target organ toxicity - single exposure****STOT - single exposure** Not available.**Specific target organ toxicity - repeated exposure****STOT - repeated exposure** Not available.**Aspiration hazard****Aspiration hazard** Not anticipated to present an aspiration hazard, based on chemical structure.**Inhalation** Vapors may cause headache, fatigue, dizziness and nausea.**Ingestion** May cause nausea, headache, dizziness and intoxication.**Skin Contact** Product has a defatting effect on skin. May cause allergic contact eczema.**Eye contact** Irritating to eyes.**Route of entry** Ingestion. Skin absorption Inhalation**Medical Symptoms** NERVOUS SYSTEM. Drowsiness, dizziness, disorientation, vertigo. Intoxication. Symptoms following overexposure to dust may include the following: Irritability. Headache. Nausea, vomiting.**12. Ecological Information****Ecotoxicity** Dangerous for the environment. May cause long-term adverse effects in the aquatic environment.**Toxicity****Toxicity** Avoid discharge to the aquatic environment.**Persistence and degradability****Persistence and degradability** There are no data on the degradability of this product.**Bioaccumulative potential****Bio-Accumulative Potential** No data available on bioaccumulation.**Partition coefficient** Not available.**Mobility in soil****Mobility** The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.**Results of PBT and vPvB assessment****Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.**Other adverse effects****Other adverse effects** Not determined.**13. Disposal considerations****Waste treatment methods**

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General information Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. Transport information**UN Number**

UN No. (DOT) 1210

UN No. (IMDG) 1210

UN No. (ICAO) 1210

UN proper shipping name

Proper shipping name (DOT) PRINTING INK, FLAMMABLE OR PRINTING INK RELATED MATERIAL (INCLUDING PRINTING INK THINNING OR REDUCING COMPOUND), FLAMMABLE

Proper shipping name (IMDG) PRINTING INK, FLAMMABLE OR PRINTING INK RELATED MATERIAL (INCLUDING PRINTING INK THINNING OR REDUCING COMPOUND), FLAMMABLE

Proper shipping name (ICAO) PRINTING INK, FLAMMABLE OR PRINTING INK RELATED MATERIAL (INCLUDING PRINTING INK THINNING OR REDUCING COMPOUND), FLAMMABLE

Transport hazard class(es)

DOT hazard class 3

DOT hazard label Flammable Liquid

TDG class 3

TDG label 3

IMDG Class 3

ICAO class/division 3

Transport labels**Packing group**

DOT pack group II

IMDG packing group II

ICAO packing group II

Environmental hazards

Environmentally Hazardous Substance

No.

Special precautions for user

EmS F-E, S-D

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

IR-291BK PRINTING INK**15. Regulatory information****Regulatory Status**

This product is formulated with a Chromium Complex dyestuff. Trace amounts of Chromium VI and its compounds may be found at levels <10ppm (0.001%). Chromium VI ions are not intentionally introduced to this product, but may be present as an integral component of the dyestuff. Chromium VI is a chemical listed on California Prop. 65.

Regulatory References

29CFR 1910.1200 Federal Regulations (OSHA Standard)

US Federal Regulations**SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

None of the ingredients are listed.

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

The following ingredients are listed:

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed.

SARA 313 Emission Reporting

The following ingredients are listed:

CAA Accidental Release Prevention

None of the ingredients are listed.

FDA - Essential Chemical

None of the ingredients are listed.

FDA - Precursor Chemical

None of the ingredients are listed.

OSHA Highly Hazardous Chemicals

None of the ingredients are listed.

US State Regulations**California Proposition 65 Carcinogens and Reproductive Toxins**

None of the ingredients are listed.

California Air Toxics "Hot Spots" (A-I)

None of the ingredients are listed:

California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed.

California Directors List of Hazardous Substances

None of the ingredients are listed.

Massachusetts "Right To Know" List

The following ingredients are listed:

Rhode Island "Right To Know" List

The following ingredients are listed:

Minnesota "Right To Know" List

The following ingredients are listed:

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New Jersey "Right To Know" List

The following ingredients are listed:

Pennsylvania "Right To Know" List

The following ingredients are listed:

Inventories

EU - EINECS/ELINCS

The following ingredients are listed:

BUTANONE

2-METHYLPROPAN-2-OL

ETHANOL

Canada - DSL/NDSL

All the ingredients are listed or exempt.

US - TSCA

The following ingredients are listed:

BUTANONE

TEGO VARIPLUS CA

CELLULOSE ACETATE BUTYRATE

2-METHYLPROPAN-2-OL

ETHANOL

US - TSCA 12(b) Export Notification

None of the ingredients are listed.

Australia - AICS

All the ingredients are listed or exempt.

Japan - MITI

All the ingredients are listed or exempt.

Korea - KECI

All the ingredients are listed or exempt.

China - IECSC

All the ingredients are listed or exempt.

Philippines - PICCS

All the ingredients are listed or exempt.

16. Other information

Key literature references and sources for data Croner's: Substances Hazardous to Health. Croner's: Emergency First Aid Guide.

Revision date 11/12/2015

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Revision	4
Supersedes date	8/5/2015
Hazard statements in full	H225 Highly flammable liquid and vapor. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.
ACA HMIS Health rating.	Moderate Hazard. (2)
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.