Carco, Inc Safety Data Sheet
F-264 Marking Ink- All except 08X Orange, Red, Black

SDS Revision Date: 1/12/2017

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Identity	F-264 Marking Ink- All except 08X Orange, Red, Black
Alternate Names	F-264 Marking Ink All except 08X Orange, Red, Black

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

Intended use	See Technical Data Sheet.
Application Method	See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name	Carco, Inc 10333 Shoemaker P.O. Box 13859 Detroit, Michigan, USA 48213
Emergency	
24 hour Emergency Telephone No.	ChemTel 1-800-255-3924 (MIS0001475) International +01-813-248-0585
Customer Service: Carco, Inc	Phone +1 (313) 925-9000 Fax +1 (313) 925-9602 Email: sales@carcousa.net

2. Hazard identification of the product

2.1. Classification of the substance or mixture

Flam. Liq. 3;H226	Flammable liquid and vapor.
Eye Irrit. 2;H319	Causes serious eye irritation.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

Warning

H226 Flammable liquid and vapor.
H319 Causes serious eye irritation.

[Prevention]:

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.

P235 Keep cool.

P240 Ground / bond container and receiving equipment.

P241 Use explosion-proof electrical / ventilating / light / equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P337+313 If eye irritation persists: Get medical advice / attention.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

[Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.

[Disposal]:

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

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
1-Propoxy-2-propanol **CAS Number: 0001569-01-3**	**50 - 75**	**Flam. Liq. 3;H226** **Eye Dam. 2A;H319**	**[1]**
1-Methoxy-2-propanol **CAS Number: 0000107-98-2**	**10 - 25**	**Flam. Liq. 3;H226** **STOT SE 3;H336**	**[1][2]**
Titanium dioxide **CAS Number: 0013463-67-7**	**10 - 25**	**Not Classified**	**[1][2]**
Rosin, Fumeric **CAS Number: 800680-57-9**	**1.0 - 10**	**Not Classified**	**[1]**
2-cyclohexanedicarboxylic acid, 1-butyl 2-(phenylmethyl) ester **CAS Number: 1200806-67-2**	**1.0 - 10**	**Not Classified**	**[1]**

[1] Substance classified with a health or environmental hazard.
[2] Substance with a workplace exposure limit.
[3] PBT-substance or vPvB-substance.
*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation	Move the exposed person to fresh air at once. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if any discomfort continues.
Eyes	Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
Ingestion	DO NOT INDUCE VOMITING! If swallowed, vomiting may occur spontaneously. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Rinse mouth thoroughly. Get medical attention.

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

Overview	Ingestion: May cause stomach pain or vomiting. See section 2 for further details.
Eyes	Causes serious eye irritation.

5. Fire-fighting measures

5.1. Extinguishing media

Use foam, extinguishing powder, dry chemicals, or carbon dioxide. Water may be ineffective. Water may be used to keep fire exposed containers cool.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: None

Keep away from heat / sparks / open flames / hot surfaces - No smoking.

Keep cool.

Ground / bond container and receiving equipment.

Use explosion-proof electrical / ventilating / light / equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

5.3. Advice for fire-fighters

In the event of fire, wear full protective clothing and NIOSH Approved Self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Move container from fire area if it can be done without risk. Use water to keep fire exposed containers cool and disperse vapors.

ERG Guide No. 129

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove sources of ignition, do not turn lights or unprotected electrical equipment on or off. In case of a major spill or spillage in a confined space evacuate the area and check that solvent vapor levels are below the Lower Explosive Limit before re-entering.

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Avoid sparks, flames, heat and smoking. Ventilate. Wear necessary protective equipment. Absorb in vermiculite, dry sand or earth and place into containers.

Small Spill: Use a non-combustible material like vermiculite, sand or earth to soak up product and place in a container for later disposal.

7. Handling and storage

7.1. Precautions for safe handling

Keep in containers lightly closed in a cool, well ventilated place. Do not store with oxidizing agents or acids. Keep in the original container. Avoid direct sunlight

The requirements of the Highly Flammable Liquids and Liquefied Petroleum Gases Regulations apply if the flashpoint is between 21°C and 32°C.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Naked flames and smoking should not be permitted in storage areas. It is recommended that fork lift trucks and electrical equipment are protected to the appropriate standard.

Store in a cool dry place.

Incompatible materials: Store away from oxidizers and acids.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0000107-98-2	1-Methoxy-2-propanol	OSHA	No Established Limit
		ACGIH	TWA: 50 ppmSTEL: 75 ppm
		NIOSH	TWA 100 ppm (360 mg/m3) ST 150 ppm (540 mg/m3)
		Supplier	No Established Limit
0001569-01-3	1-Propoxy-2-propanol	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0013463-67-7	Titanium dioxide	OSHA	TWA 15 mg/m3
		ACGIH	TWA: 10 mg/m32B, Revised 2006,
		NIOSH	Footnote ca
		Supplier	No Established Limit
1200806-67-2	2-cyclohexanedicarboxylic acid, 1-butyl 2-(phenylmethyl) ester	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
800680-57-9	Rosin, Fumeric	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000107-98-2	1-Methoxy-2-propanol	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0001569-01-3	1-Propoxy-2-propanol	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0013463-67-7	Titanium dioxide	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: Yes; Group 3: No; Group 4: No;
1200806-67-2	2-cyclohexanedicarboxylic acid, 1-butyl 2-(phenylmethyl) ester	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

800680-57-9	Rosin, Fumeric	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

Respiratory Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. The following should be effective types of air purifying respirators: Organic vapor cartridge.

Eyes Wear safety eyewear, e.g. safety spectacles, goggles or visors to protect against the splash of liquids.

Skin Overalls which cover the body, arms and legs should be worn. Skin should not be exposed. All parts of the body should be washed after contact. Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Butyl rubber. Polyethylene/ethyl vinyl alcohol laminate ("PE/EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton

Engineering Controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices Do not smoke, or drink in work area. Keep away from foodstuffs and beverages. Avoid contact with eyes and skin.
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	Clear Liquid
Odor	Sweet, glycol ether odor
Odor threshold	Not Measured
pH	NA
Melting point / freezing point	NA
Initial boiling point and boiling range	121C 250F
Flash Point	43-46C, 110-114F, Method (Setaflash)
Evaporation rate (BU.AC = 1)	0.22
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	**Lower Explosive Limit:** 1.3 **Upper Explosive Limit:** 16.9
Vapor pressure (Pa)	(mm Hg) < 10
Vapor Density	(air=1) > 3
Specific Gravity	0.90-1.1 g/ml

Solubility in Water	85-90%
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	NA
Decomposition temperature	NA
Viscosity (cSt)	NA
VOC %	80 WT-% Approximately 6.5 lbs/gal
% Volatile	75-85%

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

High temperatures and fires.

10.5. Incompatible materials

Store away from oxidizers and acids.

10.6. Hazardous decomposition products

None

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
1-Propoxy-2-propanol - (1569-01-3)	No data available	No data available	No data available	No data available	No data available
1-Methoxy-2-propanol - (107-98-2)	5,000.00, Rat - Category: 5	13,000.00, Rabbit - Category: NA	No data available	No data available	No data available
Titanium dioxide - (13463-67-7)	10,000.00, Rat - Category: NA	10,000.00, Rabbit - Category: NA	No data available	6.82, Rat - Category: NA	No data available
Rosin, Fumeric - (800680-57-9)	No data available	No data available	No data available	No data available	No data available

2-cyclohexanedicarboxylic acid, 1-butyl 2-(phenylmethyl) ester - (1200806-67-2)	No data available	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	2	Causes serious eye irritation.
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
1-Propoxy-2-propanol - (1569-01-3)	Not Available	Not Available	Not Available
1-Methoxy-2-propanol - (107-98-2)	1,000.00, Oncorhynchus mykiss	500.00, Daphnia magna	1,000.00 (96 hr), Selenastrum capricornutum
Titanium dioxide - (13463-67-7)	1,000.00, Fundulus heteroclitus	5.50, Daphnia magna	5.83 (72 hr), Pseudokirchneriella subcapitata
Rosin, Fumeric - (800680-57-9)	Not Available	Not Available	Not Available
2-cyclohexanedicarboxylic acid, 1-butyl 2-(phenylmethyl) ester - (1200806-67-2)	Not Available	Not Available	Not Available

12.2. Persistence and degradability
There is no data available on the preparation itself.
12.3. Bioaccumulative potential
Not Measured
12.4. Mobility in soil
No data available.
12.5. Results of PBT and vPvB assessment
This product contains no PBT/vPvB chemicals.
12.6. Other adverse effects
No data available.

13. Disposal considerations

13.1. Waste treatment methods
Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

	DOT (Domestic Surface Transportation)	**IMO / IMDG (Ocean Transportation)**	**ICAO/IATA**
14.1. UN number	UN1210	UN1210	UN1210
14.2. UN proper shipping name	Printing ink	Printing ink	Printing ink
14.3. Transport hazard class(es)	**DOT Hazard Class:** 3 **DOT Label:** 3	**IMDG:** 3 **Sub Class:** Not Applicable **EmS:** F-E, S-D	**Air Class:** 3 Packing Instruction:Cargo Only - 364, Passenger -353
14.4. Packing group	III	III	III

14.5. Environmental hazards

IMDG Marine Pollutant: No

14.6. Special precautions for user
No further information
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not Applicable

15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All components of this material are either listed or exempt from listing on the TSCA Inventory.

NFPA Rankings:

WHMIS Classification B3 D2B

US EPA Tier II Hazards

Fire: Yes
Sudden Release of Pressure: No
Reactive: No
Immediate (Acute): Yes
Delayed (Chronic): No

EPCRA 311/312 Chemicals and RQs:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 302 Extremely Hazardous :
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

N.J. RTK Substances (>1%):

1-Methoxy-2-propanol

Titanium dioxide

Penn RTK Substances (>1%):

1-Methoxy-2-propanol

Titanium dioxide

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H226 Flammable liquid and vapor.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness and dizziness.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

This product is RoHS and REACH compliant. It does not contain any of the RoHS listed substances. It does not contain any chemical from the candidate list of Substances of Very High Concern (SVHC), Annex XIV, or Annex XVII of Reach.

This information is based on our present knowledge. However, it does not constitute a guarantee for any specific product properties.
Carco urges the recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. The use of this product is beyond the control Carco or its distributor, therefore, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product.

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