



SAFETY DATA SHEET

FR5 MAX


Resin (Part A) - Page 1 - 9

Hardener (Part B) - Page 11 - 19

SECTION 1: IDENTIFICATION

- 1.1 Product identifier:** FR5 MAX | Part A
Other means of identification:
- 1.2 Recommended use of the chemical and restrictions on use:**
Relevant uses: Adhesive for construction
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Initial supplier identifier:**
UCAN Fastening Products
155 Champagne Drive, Unit 10, Toronto, Ontario, M3J 2C6
Phone: (416) 631-9400 Fax: (416) 631-9426
Toll Free: CAD 1-800-268-1248 | USA 1-800-461-8226
Web: www.ucanfast.com
Contact person: Balwant K. Arjune | (416) 631-9400 Ex. 252
- 1.4 Emergency phone number:** CHEMTREC 1-800-424-9300 | 1-703-527-3887 (24 hr. Emergency)

SECTION 2: HAZARD IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
The product is not flammable. On basis of test data. UN Test N.1 and ASTM D4359-90
WHMIS 2015:
Classification of this product has been carried out in accordance with Part 2 of Hazardous Products Regulations (SOR/2015-17)
Eye Irrit. 2: Eye irritation, Category 2, H319
Skin Sens. 1: Sensitisation, skin, Category 1, H317
- 2.2 Label elements:**
WHMIS 2015:
Warning
- 
- Hazard statements:**
Eye Irrit. 2: H319 - Causes serious eye irritation.
Skin Sens. 1: H317 - May cause an allergic skin reaction.
- Precautionary statements:**
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362+P364: Take off contaminated clothing and wash it before reuse.
P501: Dispose of contents/ container in accordance with local/regional/national/international regulation.
- 2.3 Health and physical hazards not otherwise classified (HHNOC - PHNOC):**
Non-applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substances:**
Non-applicable
- 3.2 Mixtures:**
Chemical description: Mixture composed of additives, pigments and resins
Components:
In accordance with Schedule I of the Hazardous Products Regulations (SOR/2015-17), the product contains:

SAFETY DATA SHEET
FR5 MAX | Part A (Resin)

According to WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and requirements of the Hazardous Product Regulations (HPR)

Date of compilation: 2022-12-16

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Identification	Chemical name/Classification	Concentration
CAS: 27813-02-1	Methacrylic acid, monoester with propane-1,2-diol Eye Irrit. 2: H319; Skin Sens. 1: H317 - Warning	5 - <10 %
CAS: 25013-15-4	Vinyltoluene Flam. Liq. 3: H226; Skin Irrit. 2: H315 - Warning	5 - <10 %
CAS: 603-35-0	Triphenylphosphine Acute Tox. 4: H302; Skin Sens. 1: H317; STOT RE 2: H373 - Warning	<1 %

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

SECTION 4: FIRST-AID MEASURES

4.1 Description of necessary measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

This product does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.

By skin contact:

May cause an allergic skin reaction. In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes on the skin (stinging, redness, rashes, blisters,...), seek medical advice with this Safety Data Sheet

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

4.2 Most important symptoms/effects, acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Non-applicable

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable (and unsuitable) extinguishing media:

Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, manipulation and use, but the product contains flammable substances. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

5.2 Specific hazards arising from the chemical:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Special protective equipment and precautions for fire-fighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

- CONTINUED ON NEXT PAGE -

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Sweep up and shovel product or other means and place in container for reuse (preferred) or disposal

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

6.3 Methods and materials for containment and cleaning up:

It is recommended:

Sweep up and shovel product or other means and place in container for reuse (preferred) or disposal

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

Due to its non-flammable nature, the product does not present a fire risk under normal conditions of storage, manipulation and use.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Store in a cool, dry, well-ventilated location

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace:

British Columbia - Occupational Health and Safety Regulation section 5.48 (Updated March 1, 2022):

Identification	Occupational exposure limits		
Vinyltoluene CAS: 25013-15-4	TLV-TWA	25 ppm	
	TLV-STEL	75 ppm	

ALBERTA - Occupational Health and Safety Code:

Identification	Occupational exposure limits		
Vinyltoluene CAS: 25013-15-4	8-hour	50 ppm	242 mg/m ³
	15-minute	100 ppm	483 mg/m ³

BRITISH COLUMBIA >> Particles (Insoluble or Poorly Soluble) Not Otherwise Classified (PNOC): TWA = 10 mg/m³

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)


8.2 Appropriate engineering controls:

A.- Individual protection measures, such as personal protective equipment


As a preventative measure it is recommended to use basic Personal Protection Equipment. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection


Pictogram	PPE	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands

Pictogram	PPE	Remarks
 Mandatory hand protection	Protective gloves against minor risks	Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using chemical protection gloves

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.



D.- Eye and face protection

Pictogram	PPE	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Bodily protection

Pictogram	PPE	Remarks
	Work clothing	Replace before any evidence of deterioration.
	Anti-slip work shoes	Replace before any evidence of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatile organic compounds (VOC) according to Canadian Environmental Protection Act, 1999:

Volatile organic compounds: 14.2 % weight
V.O.C. density at 20 °C: Non-applicable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Solid
Appearance:	Paste
Color:	Cream
Odor:	Aromatic
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	Non-applicable *
Vapour pressure at 20 °C:	Non-applicable *
Vapour pressure at 50 °C:	Non-applicable *
Evaporation rate at 20 °C:	Non-applicable *

Product description:

Density at 20 °C:	Non-applicable *
Relative density at 20 °C:	1.65
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	>20.5 mm ² /s
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *

Flammability:

Flash Point:	Non-applicable
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	355 °C
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *

Explosive (Solid):

Lower explosive limit:	Non-applicable *
Upper explosive limit:	Non-applicable *

Particle characteristics:

Median equivalent diameter:	Non-applicable *
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9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Aerosols-total percentage (by mass) of flammable components: Non-applicable *

Other safety characteristics:

Surface tension at 20 °C: Non-applicable *

Refraction index: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Precaution	Precaution	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: Produces eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- **Carcinogenicity:** Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
IARC: Vinyltoluene (3); Titanium dioxide (2B)
- **Mutagenicity:** Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- **Respiratory:** Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- **Skin:** Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- **Specific target organ toxicity (STOT)-repeated exposure:** Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.
- **Skin:** Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1	LD50 oral	11200 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	Rabbit
	LC50 inhalation	>20 mg/L	
Vinyltoluene CAS: 25013-15-4	LD50 oral	>5000 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	1.5 mg/L (ATEi)	
Triphenylphosphine CAS: 603-35-0	LD50 oral	700 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>5 mg/L	

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Ecotoxicity (aquatic and terrestrial, where available):

Acute toxicity:

Identification	Concentration		Species	Genus
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1	LC50	833 mg/L (96 h)	Scophthalmus maximus	Fish
	EC50	210 mg/L (48 h)	Acartia tonsa	Crustacean
	EC50	Non-applicable		
Vinyltoluene CAS: 25013-15-4	LC50	7.6 mg/L (96 h)	Salmo gairdneri	Fish
	EC50	1.3 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	2.6 mg/L (72 h)	Selenastrum capricornutum	Algae

Chronic toxicity:

Identification	Concentration		Species	Genus
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1	NOEC	Non-applicable		
	NOEC	45.2 mg/L	Daphnia magna	Crustacean

SAFETY DATA SHEET
FR5 MAX | Part A (Resin)

According to WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and requirements of the Hazardous Product Regulations (HPR)

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Concentration		Species	Genus
Vinyltoluene	NOEC	1.16 mg/L	N/A	Fish
CAS: 25013-15-4	NOEC	0.32 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	Non-applicable
	BOD5/COD	Non-applicable	% Biodegradable	81 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1	BCF	3
	Pow Log	0.97
	Potential	Low
Vinyltoluene CAS: 25013-15-4	BCF	5
	Pow Log	3.44
	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Methacrylic acid, monoester with propane-1,2-diol CAS: 27813-02-1	Koc	80	Henry	9E-4 Pa·m ³ /mol
	Conclusion	High	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable
Vinyltoluene CAS: 25013-15-4	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	3.2E-2 N/m (20 °C)	Moist soil	Non-applicable
Triphenylphosphine CAS: 603-35-0	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	1.168E-2 N/m (408.05 °C)	Moist soil	Non-applicable

12.5 Results of PBT and vPvB assessment:

Non-applicable

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations. In case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See epigraph 6.2.

Regulations related to waste management:

Legislation related to waste management:

Canadian Environmental Protection Act, 1999

SECTION 14: TRANSPORT INFORMATION

This product is not regulated for transport.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

- Domestic Substances List (DSL): *Methacrylic acid, monoester with propane-1,2-diol (27813-02-1)* ; *Vinyltoluene (25013-15-4)* ; *Triphenylphosphine (603-35-0)*

- Non-Domestic Substances List (NDSL): Non-applicable

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:

Canadian Environmental Protection Act, 1999

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Part 4 and Schedule I of the Hazardous Products Regulations (SOR/2015-17)

Texts of the legislative phrases mentioned in section 2:

H319: Causes serious eye irritation.

H317: May cause an allergic skin reaction.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

WHMIS 2015:

Acute Tox. 4: H302 - Harmful if swallowed.

Eye Irrit. 2: H319 - Causes serious eye irritation.

Flam. Liq. 3: H226 - Flammable liquid and vapour.

Skin Irrit. 2: H315 - Causes skin irritation.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Oral).

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://whmis.org/>

Abbreviations and acronyms:

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand BOD5: 5-day biochemical oxygen demand

BCF: Bioconcentration factor LD50: Lethal Dose 50 CL50: Lethal Concentration 50

EC50: Effective concentration 50

Log-POW: Octanol-water partition coefficient

Koc: Partition coefficient of organic carbon

IARC: International Agency for Research on Cancer

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SAFETY DATA SHEET
FR5 MAX | Part B (Hardener)

According to WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and requirements of the Hazardous Product Regulations (HPR)

Date of compilation: 2022-12-15


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Version: 3 (Replaced 2)

SECTION 1: IDENTIFICATION

- 1.1 Product identifier:** FR5 MAX | Part B
Other means of identification:
- 1.2 Recommended use of the chemical and restrictions on use:**
Relevant uses: Adhesive for construction
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Initial supplier identifier:**
UCAN Fastening Products
155 Champagne Drive, Unit 10, Toronto, Ontario, M3J 2C6
Phone: (416) 631-9400 Fax: (416) 631-9426
Toll Free: CAD 1-800-268-1248 | USA 1-800-461-8226
Web: www.ucanfast.com
Contact person: Balwant K. Arjune | (416) 631-9400 Ex. 252
- 1.4 Emergency phone number:** CHEMTREC 1-800-424-9300 | 1-703-527-3887 (24 hr. Emergency)

SECTION 2: HAZARD IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
WHMIS 2015:
Classification of this product has been carried out in accordance with Part 2 of Hazardous Products Regulations (SOR/2015-17)
Eye Irrit. 2: Eye irritation, Category 2, H319
Skin Sens. 1: Sensitisation, skin, Category 1, H317
- 2.2 Label elements:**
WHMIS 2015:
Warning

Hazard statements:
Eye Irrit. 2: H319 - Causes serious eye irritation.
Skin Sens. 1: H317 - May cause an allergic skin reaction.
Precautionary statements:
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P501: Dispose of contents/ container in accordance with local/regional/national/international regulation.
- 2.3 Health and physical hazards not otherwise classified (HHNOC - PHNOC):**
Non-applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substances:**
Non-applicable
- 3.2 Mixtures:**
Chemical description: Mixture composed of additives, pigments and resins
Components:
In accordance with Schedule I of the Hazardous Products Regulations (SOR/2015-17), the product contains:

SAFETY DATA SHEET
FR5 MAX | Part B (Hardener)

According to WHMIS 2015, in compliance with the Hazardous Product Act (HPA, as amended) and requirements of the Hazardous Product Regulations (HPR)

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Identification	Chemical name/Classification	Concentration
CAS: 94-36-0	Dibenzoyl peroxide Eye Irrit. 2: H319; Org. Perox. B: H241; Skin Sens. 1: H317 - Danger	10 - <30 %
CAS: 1333-86-4	Carbon black Carc. 2: H351 - Warning	<1 %

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Other information:

Identification	M-factor
Dibenzoyl peroxide CAS: 94-36-0	Acute 10 Chronic 10

Identification	Specific concentration limit
Dibenzoyl peroxide CAS: 94-36-0	% (w/w) >=52: Org. Perox. B - H241 35<= % (w/w) <52: Org. Perox. D - H242

SECTION 4: FIRST-AID MEASURES

4.1 Description of necessary measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

This product does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.

By skin contact:

May cause an allergic skin reaction. In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes on the skin (stinging, redness, rashes, blisters,...), seek medical advice with this Safety Data Sheet

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

In case of consumption, seek immediate medical assistance showing the SDS of this product.

4.2 Most important symptoms/effects, acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Non-applicable

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable (and unsuitable) extinguishing media:

Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

5.2 Specific hazards arising from the chemical:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Special protective equipment and precautions for fire-fighters:

- CONTINUED ON NEXT PAGE -

SECTION 5: FIRE-FIGHTING MEASURES (continued)

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Sweep up and shovel product or other means and place in container for reuse (preferred) or disposal

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

6.3 Methods and materials for containment and cleaning up:

It is recommended:

Sweep up and shovel product or other means and place in container for reuse (preferred) or disposal

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

Due to its non-flammable nature, the product does not present a fire risk under normal conditions of storage, manipulation and use.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Store in a cool, dry, well-ventilated location

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace:

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

British Columbia - Occupational Health and Safety Regulation section 5.48 (Updated March 1, 2022):

Identification	Occupational exposure limits	
Dibenzoyl peroxide CAS: 94-36-0	TLV-TWA	5 mg/m ³
	TLV-STEL	
Carbon black CAS: 1333-86-4	TLV-TWA	3 mg/m ³
	TLV-STEL	

ALBERTA - Occupational Health and Safety Code:

Identification	Occupational exposure limits	
Dibenzoyl peroxide CAS: 94-36-0	8-hour	5 mg/m ³
	15-minute	
Carbon black CAS: 1333-86-4	8-hour	3.5 mg/m ³
	15-minute	

BRITISH COLUMBIA >> Particles (Insoluble or Poorly Soluble) Not Otherwise Classified (PNOC): TWA = 10 mg/m³


8.2 Appropriate engineering controls:

A.- Individual protection measures, such as personal protective equipment


As a preventative measure it is recommended to use basic Personal Protection Equipment. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection


Pictogram	PPE	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands

Pictogram	PPE	Remarks
 Mandatory hand protection	Protective gloves against minor risks	Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using chemical protection gloves

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Eye and face protection

Pictogram	PPE	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.



E.- Bodily protection

Pictogram	PPE	Remarks
	Work clothing	Replace before any evidence of deterioration.
	Anti-slip work shoes	Replace before any evidence of deterioration.

F.- Additional emergency measures

- CONTINUED ON NEXT PAGE -

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatile organic compounds (VOC) according to Canadian Environmental Protection Act, 1999:

Volatile organic compounds: 0 % weight
V.O.C. density at 20 °C: 0 kg/m³ (0 g/L)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C: Solid
Appearance: Paste
Color: Black
Odor: Characteristic
Odour threshold: Non-applicable *

Volatility:

Boiling point at atmospheric pressure: Non-applicable *
Vapour pressure at 20 °C: Non-applicable *
Vapour pressure at 50 °C: Non-applicable *
Evaporation rate at 20 °C: Non-applicable *

Product description:

Density at 20 °C: Non-applicable *
Relative density at 20 °C: 1.55
Dynamic viscosity at 20 °C: Non-applicable *
Kinematic viscosity at 20 °C: Non-applicable *
Kinematic viscosity at 40 °C: >20.5 mm²/s
Concentration: Non-applicable *
pH: 6 (at 10 %)
Vapour density at 20 °C: Non-applicable *
Partition coefficient n-octanol/water 20 °C: Non-applicable *
Solubility in water at 20 °C: Non-applicable *
Solubility properties: Miscible
Decomposition temperature: Non-applicable *
Melting point/freezing point: Non-applicable *

Flammability:

Flash Point: Non-applicable
Flammability (solid, gas): Non-applicable *
Autoignition temperature: 435 °C
Lower flammability limit: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Upper flammability limit: Non-applicable *

Explosive (Solid):

Lower explosive limit: Non-applicable *

Upper explosive limit: Non-applicable *

Particle characteristics:

Median equivalent diameter: Non-applicable *

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties: Non-applicable *

Oxidising properties: Non-applicable *

Corrosive to metals: Non-applicable *

Heat of combustion: Non-applicable *

Aerosols-total percentage (by mass) of flammable components: Non-applicable *

Other safety characteristics:

Surface tension at 20 °C: Non-applicable *

Refraction index: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Heating may cause a fire or explosion	Avoid direct impact	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Precaution	Avoid alkalines, heavy metals, reducing agents, peroxide accelerating agents

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

- CONTINUED ON NEXT PAGE -

SECTION 11: TOXICOLOGICAL INFORMATION (continued)

A- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. For more information see section 3
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: Produces eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous with carcinogenic effects. For more information see section 3.
IARC: Glass, oxide, chemicals (1); Carbon black (2B); Dibenzoyl peroxide (3)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Dibenzoyl peroxide CAS: 94-36-0	LD50 oral	7710 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>5 mg/L	
Carbon black CAS: 1333-86-4	LD50 oral	>5000 mg/kg	
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>5 mg/L	

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Ecotoxicity (aquatic and terrestrial, where available):

Acute toxicity:

SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Concentration		Species	Genus
Dibenzoyl peroxide CAS: 94-36-0	LC50	0.0602 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	0.11 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	0.071 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae
Carbon black CAS: 1333-86-4	LC50	1000 mg/L (96 h)	Brachydanio rerio	Fish
	EC50	5600 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
Dibenzoyl peroxide CAS: 94-36-0	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	10 days
	BOD5/COD	Non-applicable	% Biodegradable	68 %

12.3 Bioaccumulative potential:

Not available

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Dibenzoyl peroxide CAS: 94-36-0	Koc	6309.57	Henry	Non-applicable
	Conclusion	Immobile	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable

12.5 Results of PBT and vPvB assessment:

Non-applicable

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations. In case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See epigraph 6.2.

Regulations related to waste management:

Legislation related to waste management:

Canadian Environmental Protection Act, 1999

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to Transportation of Dangerous Goods Regulations including Amendment SOR/2017-100

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SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number:** UN3077
- 14.2 United Nations proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Dibenzoyl peroxide)
- 14.3 Transport hazard class(es):** 9
- Labels:** 9
- 14.4 Packing group:** III
- 14.5 Environmental hazard:** Yes
- 14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**
- Physico-Chemical properties: see section 9
- 14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 40-20:



- 14.1 UN number:** UN3077
- 14.2 United Nations proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Dibenzoyl peroxide)
- 14.3 Transport hazard class(es):** 9
- Labels:** 9
- 14.4 Packing group:** III
- 14.5 Marine pollutant:** Yes
- 14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**
- Special regulations: 335, 966, 274, 967, 969
- EmS Codes: F-A, S-F
- Physico-Chemical properties: see section 9
- Limited quantities: 5 kg
- Segregation group: Non-applicable
- 14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2023:



- 14.1 UN number:** UN3077
- 14.2 United Nations proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Dibenzoyl peroxide)
- 14.3 Transport hazard class(es):** 9
- Labels:** 9
- 14.4 Packing group:** III
- 14.5 Environmental hazard:** Yes
- 14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**
- Physico-Chemical properties: see section 9
- 14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Non-applicable

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

- Domestic Substances List (DSL): *Dibenzoyl peroxide (94-36-0)* ; *Carbon black (1333-86-4)*
- Non-Domestic Substances List (NDSL): Non-applicable

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

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SECTION 15: REGULATORY INFORMATION (continued)

Other legislation:

Canadian Environmental Protection Act, 1999

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Part 4 and Schedule I of the Hazardous Products Regulations (SOR/2015-17)

Texts of the legislative phrases mentioned in section 2:

H319: Causes serious eye irritation.

H317: May cause an allergic skin reaction.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

WHMIS 2015:

Carc. 2: H351 - Suspected of causing cancer.

Eye Irrit. 2: H319 - Causes serious eye irritation.

Org. Perox. B: H241 - Heating may cause a fire or explosion.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://whmis.org/>

Abbreviations and acronyms:

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand BOD5: 5-day biochemical oxygen demand

BCF: Bioconcentration factor LD50: Lethal Dose 50 CL50: Lethal Concentration 50

EC50: Effective concentration 50

Log-POW: Octanol-water partition coefficient

Koc: Partition coefficient of organic carbon

IARC: International Agency for Research on Cancer

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