

Material Safety Data Sheet

Flux NC 264-5



1. Product and company identification

Product name	: Flux NC 264-5
Synonym	: NC 264-5
Trade name	: Flux NC 264-5
Material uses	: Industrial applications: Fluxing agent
Manufacturer	: AIM 9100 Henri Bourassa East Montreal, QC H1E 2S4 (514) 494-2000 In the United States: AIM 25 Kenney Drive Cranston, RI 02920 (800) CALL-AIM
Validation date	: 10/19/2016
Print date	: 10/19/2016
<u>In case of emergency</u>	: INFOTRAC North America: (800) 535-5053 International: (352) 323-3500
Product type	: Liquid. [Clear.]

2. Hazards identification

Emergency overview

Physical state	: Liquid. [Clear.]
Color	: Colorless to light yellow.
Odor	: Alcohol like.
Signal word	: WARNING!
Hazard statements	: FLAMMABLE LIQUID AND VAPOR. CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE SKIN IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.
Precautionary measures	: Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks and flame. Keep container tightly closed. Wash thoroughly after handling.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential acute health effects

Inhalation	: No known significant effects or critical hazards.
Ingestion	: Harmful if swallowed.
Skin	: Slightly irritating to the skin.
Eyes	: Severely irritating to eyes. Risk of serious damage to eyes.

Potential chronic health effects

Chronic effects	: Contains material that can cause target organ damage.
Carcinogenicity	: No known significant effects or critical hazards.

2. Hazards identification

- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : Contains material which causes damage to the following organs: the nervous system, eye, lens or cornea.
 Contains material which may cause damage to the following organs: blood, liver, spleen, upper respiratory tract, skin, central nervous system (CNS).
 Contains material which does not cause damage to the following organs: kidneys, lungs, the reproductive system, mucous membranes.

Over-exposure signs/symptoms

- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin** : Adverse symptoms may include the following:
 irritation
 redness
- Eyes** : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness
- Medical conditions aggravated by over-exposure** : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
Isopropyl alcohol	67-63-0	90 - 100
Naphtha (petroleum), heavy alkylate	64741-65-7	0.1 - 10
dimethyl glutarate	1119-40-0	0.1 - 10
2-phenoxyethanol	122-99-6	0.1 - 10
succinic acid	110-15-6	0.1 - 10
adipic acid	124-04-9	0.1 - 10

Canada

Name	CAS number	%
Isopropyl alcohol	67-63-0	90 - 100
Naphtha (petroleum), heavy alkylate	64741-65-7	0.1 - 10
dimethyl glutarate	1119-40-0	0.1 - 10
2-phenoxyethanol	122-99-6	0.1 - 10
succinic acid	110-15-6	0.1 - 10
adipic acid	124-04-9	0.1 - 10
rosin	8050-09-7	0.1 - 10

Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special

3. Composition/information on ingredients

Isopropyl alcohol	67-63-0	1219	90 - 100	2000 ppm	2	3	0	-
succinic acid	110-15-6	Not available.	0.1 - 10	-	1	1	0	-
dimethyl glutarate	1119-40-0	Not available.	0.1 - 10	-	2	0	0	-
dimethyl isophthalate	1459-93-4	Not regulated.	0.1 - 10	-	1	1	0	-
2-phenoxyethanol	122-99-6	Not regulated.	0.1 - 10	-	2	1	0	-
adipic acid	124-04-9	Not available.	0.1 - 10	-	2	1	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

- Flammability of the product** : Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
- Extinguishing media**
- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
Isopropyl alcohol	<p>ACGIH (United States, 0/1994). TWA: 400 ppm STEL: 500 ppm TWA: 983 mg/m³ STEL: 1230 mg/m³</p> <p>NIOSH (United States, 0/1994). TWA: 400 ppm STEL: 500 ppm TWA: 980 mg/m³ STEL: 1225 mg/m³</p> <p>OSHA (United States, 0/1989). TWA: 400 ppm STEL: 500 ppm TWA: 980 mg/m³ STEL: 1225 mg/m³</p> <p>ACGIH TLV (United States, 3/2016). TWA: 200 ppm 8 hours. STEL: 400 ppm 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 400 ppm 10 hours. TWA: 980 mg/m³ 10 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 2/2013). TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours.</p>
adipic acid	<p>ACGIH (United States, 0/1994). TWA: 5 mg/m³</p> <p>ACGIH TLV (United States, 3/2016). TWA: 5 mg/m³ 8 hours.</p>

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			Notations
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	
Isopropyl alcohol	US ACGIH 3/2016	200	-	-	400	-	-	-	-	-	
	AB 4/2009	200	492	-	400	984	-	-	-	-	
	BC 5/2015	200	-	-	400	-	-	-	-	-	
	ON 7/2015	200	-	-	400	-	-	-	-	-	
	QC 1/2014	400	983	-	500	1230	-	-	-	-	
	SK 7/2013	-	-	200 PPM	-	-	400 PPM	-	-	-	
2-phenoxyethanol adipic acid	ON 7/2015	25	141	-	-	-	-	-	-	-	[1]
	US ACGIH 3/2016	-	5	-	-	-	-	-	-	-	
	AB 4/2009	-	5	-	-	-	-	-	-	-	
	BC 5/2015	-	5	-	-	-	-	-	-	-	
	ON 7/2015	-	5	-	-	-	-	-	-	-	
	QC 1/2014	-	5	-	-	-	-	-	-	-	
rosin	SK 7/2013	-	5	-	-	10	-	-	-	-	[3][4]
	US ACGIH 3/2016	-	-	-	-	-	-	-	-	-	
rosin, formaldehyde	QC 1/2014	-	0.1	-	-	-	-	-	-	-	[3]

8. Exposure controls/personal protection

[1]Absorbed through skin. [3]Skin sensitization [4]Respiratory sensitization

Mexico

Occupational exposure limits

Ingredient	Exposure limits
Isopropyl alcohol	NOM-010-STPS (Mexico, 4/2016). LMPE-PPT: 200 ppm 8 hours. LMPE-CT: 400 ppm 15 minutes.
adipic acid	NOM-010-STPS (Mexico, 4/2016). LMPE-PPT: 5 mg/m ³ 8 hours.

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical state	: Liquid. [Clear.]
Flash point	: Closed cup: <10°C (<50°F) [ASTM D-56 (Tagliabue).]
Color	: Colorless to light yellow.
Odor	: Alcohol like.
pH	: 5.8 to 6.3
Boiling/condensation point	: 82.2°C (180°F)
Relative density	: 0.78 to 0.82
Vapor density	: >1 [Air = 1]
Volatility	: 96.5 to 97% (w/w)
Dispersibility properties	: Very slightly dispersible in the following materials: hot water. Not dispersible in the following materials: cold water.
Solubility	: Partially soluble in the following materials: methanol and diethyl ether.
Aerosol product	

10. Stability and reactivity

Chemical stability	: The product is stable.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Isopropyl alcohol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
dimethyl glutarate	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
2-phenoxyethanol	LD50 Dermal	Rabbit	5000 mg/kg	-
	LD50 Dermal	Rat	14422 mg/kg	-
	LD50 Oral	Mouse	933 mg/kg	-
	LD50 Oral	Rat	1260 mg/kg	-
	LD50 Oral	Rat	1260 mg/kg	-
	LD50 Oral	Rat	2260 mg/kg	-
succinic acid	LD50 Oral	Rat	2260 mg/kg	-
adipic acid	LD50 Dermal	Rabbit	>7940 mg/kg	-
	LD50 Oral	Rat	5050 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Isopropyl alcohol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
dimethyl glutarate	Skin - Mild irritant	Rabbit	-	500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.1 Milliliters	-
	Eyes - Moderate irritant	Rabbit	-	6 milligrams	-
2-phenoxyethanol	Eyes - Severe irritant	Rabbit	-	24 hours 250 Micrograms	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Severe irritant	Rabbit	-	750 Micrograms	-
succinic acid	Eyes - Severe irritant	Rabbit	-	10 milligrams	-
adipic acid	Eyes - Mild irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.25 Grams	-
	Skin - Mild irritant	Rabbit	-		-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Human: ISOPROPYL ALCOHOL is excreted in maternal milk.

Classification

Product/ingredient name	OSHA	IARC	NTP	ACGIH	EPA	NIOSH
Isopropyl alcohol	-	3	-	A4	-	-
Naphtha (petroleum), heavy alkylate	-	4	-	A4	-	-
adipic acid	-	-	-	-	-	None.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Isopropyl alcohol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
dimethyl glutarate	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
2-phenoxyethanol	LD50 Dermal	Rabbit	5000 mg/kg	-
	LD50 Dermal	Rat	14422 mg/kg	-
	LD50 Oral	Mouse	933 mg/kg	-
	LD50 Oral	Rat	1260 mg/kg	-
	LD50 Oral	Rat	1260 mg/kg	-
succinic acid	LD50 Oral	Rat	2260 mg/kg	-
adipic acid	LD50 Dermal	Rabbit	>7940 mg/kg	-

11. Toxicological information

rosin	LD50 Oral LD50 Oral	Rat Rat	5050 mg/kg 7600 mg/kg	- -
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Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Isopropyl alcohol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
dimethyl glutarate	Eyes - Moderate irritant	Rabbit	-	0.1 Milliliters	-
	Eyes - Moderate irritant	Rabbit	-	6 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 250 Micrograms	-
2-phenoxyethanol	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Severe irritant	Rabbit	-	750 Micrograms	-
succinic acid	Eyes - Mild irritant	Rabbit	-	10 milligrams	-
adipic acid	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Mild irritant	Rabbit	-	0.25 Grams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Human: ISOPROPYL ALCOHOL is excreted in maternal milk.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Isopropyl alcohol	A4	3	-	-	-	-
Naphtha (petroleum), heavy alkylate	A4	4	-	-	-	-
adipic acid	-	-	-	None.	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Mexico

Acute toxicity

11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
Isopropyl alcohol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
dimethyl glutarate	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
2-phenoxyethanol	LD50 Dermal	Rabbit	5000 mg/kg	-
	LD50 Dermal	Rat	14422 mg/kg	-
	LD50 Oral	Mouse	933 mg/kg	-
	LD50 Oral	Rat	1260 mg/kg	-
succinic acid	LD50 Oral	Rat	1260 mg/kg	-
	LD50 Oral	Rat	2260 mg/kg	-
adipic acid	LD50 Dermal	Rabbit	>7940 mg/kg	-
	LD50 Oral	Rat	5050 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Score	Exposure	Observation
Isopropyl alcohol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
dimethyl glutarate	Eyes - Moderate irritant	Rabbit	-	0.1 Milliliters	-
	Eyes - Moderate irritant	Rabbit	-	6 milligrams	-
2-phenoxyethanol	Eyes - Severe irritant	Rabbit	-	24 hours 250 Micrograms	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Severe irritant	Rabbit	-	750 Micrograms	-
succinic acid	Eyes - Severe irritant	Rabbit	-	24 hours 500 milligrams	-
dimethyl isophthalate	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
adipic acid	Eyes - Mild irritant	Rabbit	-	10 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Mild irritant	Rabbit	-	0.25 Grams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Human: ISOPROPYL ALCOHOL is excreted in maternal milk.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Isopropyl alcohol	A4	3	-	-	-	-
Naphtha (petroleum), heavy alkylate	A4	4	-	-	-	-
adipic acid	-	-	-	None.	-	-

Mutagenicity

11. Toxicological information

- Conclusion/Summary** : Not available.
- Teratogenicity**
- Conclusion/Summary** : Not available.
- Reproductive toxicity**
- Conclusion/Summary** : Not available.
- Other information** : To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

12. Ecological information

- Ecotoxicity** : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Isopropyl alcohol	Acute EC50 929 mg/l Fresh water Acute LC50 1400000 µg/l Marine water	Daphnia - Daphnia magna Crustaceans - Crangon crangon	48 hours 48 hours
2-phenoxyethanol	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
succinic acid	Acute LC50 344000 µg/l Fresh water Acute EC50 374200 µg/l Fresh water	Fish - Pimephales promelas Daphnia - Daphnia magna - Larvae	96 hours 48 hours
adipic acid	Acute LC50 97000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

- Conclusion/Summary** : Not available.

Persistence/degradability

- Conclusion/Summary** : Not available.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Isopropyl alcohol	Acute EC50 929 mg/l Fresh water Acute LC50 1400000 µg/l Marine water	Daphnia - Daphnia magna Crustaceans - Crangon crangon	48 hours 48 hours
2-phenoxyethanol	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
succinic acid	Acute LC50 344000 µg/l Fresh water Acute EC50 374200 µg/l Fresh water	Fish - Pimephales promelas Daphnia - Daphnia magna - Larvae	96 hours 48 hours
adipic acid	Acute LC50 97000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

- Conclusion/Summary** : Not available.

Persistence/degradability

- Conclusion/Summary** : Not available.

Mexico

Aquatic ecotoxicity

12. Ecological information

Product/ingredient name	Result	Species	Exposure
Isopropyl alcohol	Acute EC50 929 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
2-phenoxyethanol	Acute LC50 344000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 374200 µg/l Fresh water	Daphnia - Daphnia magna - Larvae	48 hours
succinic acid	Acute LC50 97000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Toxicity of the products of biodegradation : The products of degradation are less toxic than the product itself.

Other adverse effects : No known significant effects or critical hazards.



13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.





Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	1993	FLAMMABLE LIQUIDS, N.O.S. (Isopropanol, Petroleum distillates)	3	II		-
TDG Classification	1993	FLAMMABLE LIQUIDS, N.O.S. (Isopropanol, Petroleum distillates)	3	II		Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).

14. Transport information

Mexico Classification	1993	FLAMMABLE LIQUIDS, N.O.S. (Isopropanol, Petroleum distillates)	3	II		-
ADR/RID Class	1993	FLAMMABLE LIQUIDS, N.O.S. (Isopropanol, Petroleum distillates)	3	II		Special provisions 640 (C) Tunnel code (D/E)
IMDG Class	1993	FLAMMABLE LIQUIDS, N.O.S. (Isopropanol, Petroleum distillates)	3	II		-
IATA-DGR Class	1993	FLAMMABLE LIQUIDS, N.O.S. (Isopropanol, Petroleum distillates)	3	II		-

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Flammable liquid
Irritating material
Target organ effects

U.S. Federal regulations : **TSCA 8(a) PAIR**: 2-phenoxyethanol
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
TSCA 8(d) H and S data reporting: 2-phenoxyethanol: July 1, 1993
TSCA inventory: ALL COMPONENTS
Clean Water Act (CWA) 311: adipic acid

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard

15. Regulatory information

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Isopropyl alcohol	90 - 100	Yes.	No.	No.	Yes.	Yes.
Naphtha (petroleum), heavy alkylate	0.1 - 10	Yes.	No.	No.	No.	Yes.
dimethyl glutarate	0.1 - 10	No.	No.	No.	Yes.	No.
2-phenoxyethanol	0.1 - 10	No.	No.	No.	Yes.	Yes.
succinic acid	0.1 - 10	No.	No.	No.	Yes.	No.
adipic acid	0.1 - 10	No.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Isopropyl alcohol 2-phenoxyethanol	67-63-0 122-99-6	90 - 100 0.1 - 10
Supplier notification	Isopropyl alcohol 2-phenoxyethanol	67-63-0 122-99-6	90 - 100 0.1 - 10

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: ISOPROPYL ALCOHOL; 2-PROPANOL
- New York** : The following components are listed:
- New Jersey** : The following components are listed: ISOPROPYL ALCOHOL; 2-PROPANOL
- Pennsylvania** : The following components are listed: ISOPROPYL ALCOHOL MANUFACTURE (STRONG-ACID PROCESS); HEXANEDIOIC ACID

United States inventory (TSCA 8b) : TSCA inventory: ALL COMPONENTS

Canada

WHMIS (Canada) : Class B-2: Flammable liquid
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

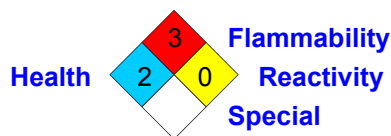
Canadian lists

- Canadian NPRI** : The following components are listed: Isopropyl alcohol; Heavy alkylate naphtha; Adipic acid
- CEPA Toxic substances** : None of the components are listed.
- Canada inventory** : At least one component is not listed in DSL but all such components are listed in NDSL.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



International regulations

15. Regulatory information

- International lists** :
- Australia inventory (AICS)**: All components are listed or exempted.
 - China inventory (IECSC)**: All components are listed or exempted.
 - Japan inventory (ENCS)**: Not determined.
 - Japan inventory (ISHL)**: Not determined.
 - Korea inventory**: All components are listed or exempted.
 - Malaysia Inventory (EHS Register)**: Not determined.
 - New Zealand Inventory of Chemicals (NZIoC)**: All components are listed or exempted.
 - Philippines inventory (PICCS)**: All components are listed or exempted.
 - Taiwan Chemical Substances Inventory (TCSI)**: All components are listed or exempted.
 - Turkey inventory**: Not determined.
- Chemical Weapons Convention List Schedule I Chemicals** : Not listed
- Chemical Weapons Convention List Schedule II Chemicals** : Not listed
- Chemical Weapons Convention List Schedule III Chemicals** : Not listed

16. Other information

- Label requirements** : FLAMMABLE LIQUID AND VAPOR. CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE SKIN IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

- Hazardous Material Information System (U.S.A.)** :

Health	2
Flammability	3
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

- National Fire Protection Association (U.S.A.)** :



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16. Other information

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

- References** : -ACGIH, Threshold Limit Values, 1994-1995. -Canada Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987 Hazardous Products Act "Ingredient Disclosure List". -CFR29, OSHA's Permissible Exposure Limits, revision July, 1993. -CFR29, part 1910.1200, Hazard Communication. -CHEMTOX database -Components' manufacturer's Material Safety Data Sheet. -CRC Handbook of chemistry and physics, 67 th edition, CRC Press inc., Boca Raton, Florida. -CSST (Comission de Santé et Sécurité au Travail), document #RT-12: Classification of Certain Chemical Substances. -IATA, Dangerous Goods Regulations, 37th edition (January 1, 1996) -NFPA, Fire Protection Guide to Chemical Hazards, 11th edition. -NIOSH, Pocket Guide to Chemical Hazards, revision June 1994. Sigma-Alrich handbook of fine chemicals, 1998 -TSCA (Toxic Substance Contral Act), Chemical Substance Inventory List, 1985.
- Other special considerations** : -ALL INGREDIENTS WITH SUSCEPTIBLE HAZARDS THAT ARE PRESENT IN A CONCENTRATION GREATER THAN 1 % (GREATER THAN 0.1 % FOR CARCINOGENS) HAVE BEEN DISCLOSED IN THIS SAFETY DOCUMENT.

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▣ Indicates information that has changed from previously issued version.

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.