

SECTION 1: IDENTIFICATION

1.1 Product identifier: KROLAC H-2130-F

Other means of identification:

Non-applicable

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses (Professional users): Hardener for coatings
Relevant uses (Industrial user): Hardener for coatings
For Professional users/Industrial user only.
Uses advised against: All uses not specified in this section or in section 7.3

1.3 Name, U.S. address, and U.S. telephone number of the chemical manufacturer, importer, or other responsible party:

Roberlo do Brasil LTDA
Rua Shirlei Boeira Souto, 402 - Centro Industrial Mauá
83413-740 Colombo - Paraná - Brasil
Phone: +55 41-3139-8200
info@roberlo.com.br

1.4 Emergency phone number: 0800 0148110 (24h) (UTC -3:00) Brasil / +34 972 478060 (8:00-12:45 / 14:15-17:30 h) ROBERLO (Spain) (GMT + 1:00)

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the substance or mixture:

29 CFR 1910.1200:

Classification of the chemical in accordance with paragraph (d)(1)(i) of §1910.1200
Carc. 2: Carcinogenicity, Category 2, H351
Eye Irrit. 2A: Eye irritation, Category 2A, H319
Flam. Liq. 3: Flammable liquids, Category 3, H226
Skin Irrit. 2: Skin irritation, Category 2, H315
Skin Sens. 1: Sensitisation, skin, Category 1, H317
STOT RE 2: Specific target organ toxicity — Repeated exposure, Hazard Category 2 (Oral), H373
STOT RE 2: Specific target organ toxicity — Repeated exposure, Hazard Category 2 (Inhalation), H373
STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336
STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

2.2 Label elements:

29 CFR 1910.1200:

Warning



Hazard statements:

H226 - Flammable liquid and vapour.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H351 - Suspected of causing cancer.
H373 - May cause damage to organs through prolonged or repeated exposure (Oral). Organs affected: All gross lesions and masses.
H373 - May cause damage to organs through prolonged or repeated exposure (Inhalation). Organs affected: Hearing organs, All gross lesions and masses.

Precautionary statements:

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SECTION 2: HAZARD(S) IDENTIFICATION (continued)

P201: Obtain special instructions before use.
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P260: Do not breathe vapours
P261: Avoid breathing vapours
P264: Wash thoroughly after use.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/respiratory protection/eye protection/protective footwear.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313: IF exposed or concerned: Get medical advice/attention.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P314: Get medical advice/attention if you feel unwell.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.
P370+P378: In case of fire: Use Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC) to extinguish.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P403+P235: Store in a well-ventilated place. Keep cool.
P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

Substances that contribute to the classification

N-butyl acetate; Xylene; Hexamethylene diisocyanate, oligomers (<0.1 % O=C=N-R-N=C=O); Ethylbenzene

Additional labeling:



WARNING

This product can expose you to chemicals including Ethylbenzene, which is [are] known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

2.3 Hazards not otherwise classified (HNOC):

Non-applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Non-applicable

3.2 Mixtures:

Chemical description: polyisocyanate

Components:

Remaining components are non-hazardous and/or present at amounts below reportable limits. The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.Therefore, in accordance with Appendix D to § 1910.1200, the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 123-86-4	**N-butyl acetate** Flam. Liq. 3: H226; STOT SE 3: H336 - Warning	**25 - <50 %**
CAS: 1330-20-7	**Xylene** Acute Tox. 4: H312+H332; Asp. Tox. 1: H304; Eye Irrit. 2A: H319; Flam. Liq. 3: H226; Skin Irrit. 2: H315; STOT RE 2: H373; STOT SE 3: H335 - Danger	**25 - <50 %**
CAS: 28182-81-2	**Hexamethylene diisocyanate, oligomers (<0.1 % O=C=N-R-N=C=O)** Acute Tox. 4: H332; Skin Sens. 1: H317; STOT SE 3: H335 - Warning	**25 - <50 %**
CAS: 100-41-4	**Ethylbenzene** Acute Tox. 4: H332; Asp. Tox. 1: H304; Carc. 2: H351; Flam. Liq. 2: H225; STOT RE 2: H373 - Danger	**5 - <10 %**
CAS: 64742-95-6	**Hydrocarbons, C9, aromatics** Asp. Tox. 1: H304; Flam. Liq. 3: H226; STOT SE 3: H335; STOT SE 3: H336 - Danger	**1 - <2,5 %**

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

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:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with water for at least 15 minutes. 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:

Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC)

Unsuitable extinguishing media:

Water jet

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 Self Contained Breathing Apparatus. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

Additional provisions:

As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Only properly trained personnel should be involved in firefighting. Evacuate nonessential personnel from the fire area. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation. 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:

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

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:

For accidental releases in excess of reportables quantities (RQ) (Table 302.4), refer to 40 CFR 302 for detailed instructions concerning reporting requirements and notify the National Response Center (800) 424-8802.
Prevent the entrance of product in drains, sewers or watercourses. Absorb the spill using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. Collect the product in appropriate containers and manage it according to current legislation.
Spillages in water or sea:
Small spillages:
Contain spillage using barriers or similar equipment. Use suitable absorbents for collection and treat the waste in accordance with current regulations.
Large spillages:
If possible, contain spillage in open water using barriers or similar equipment. If this is not possible, try to control its spread and collect the product with suitable mechanical means. Always consult experts before using dispersants and make sure you have the necessary approvals if they are to be used. Treat the waste according to current regulations.

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 standards 29 CFR 1910 Occupational Safety and Health Standards. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

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

Because the product is a flammable liquid, storage should meet the requirement of 29 CFR 1910.106, Flammable and Combustible Liquids Code. Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,…) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems and with the minimum requirements for protecting the security and health of workers. Consult section 10 for conditions and materials that should be avoided.

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.- Specific storage requirements

Minimum Temp.: 41 ºF

Maximum Temp.: 95 ºF

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):

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SECTION 7: HANDLING AND STORAGE (continued)

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 assessed in the workplace:

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000):

Identification	Occupational exposure limits		
N-butyl acetate CAS: 123-86-4	8-hour TWA PEL	150 ppm	710 mg/m³
	Ceiling Values - TWA PEL		
Xylene (1) CAS: 1330-20-7	8-hour TWA PEL	100 ppm	435 mg/m³
	Ceiling Values - TWA PEL		
Ethylbenzene (1) CAS: 100-41-4	8-hour TWA PEL	100 ppm	435 mg/m³
	Ceiling Values - TWA PEL		
Dibutyltin Dilaurate CAS: 77-58-7	8-hour TWA PEL		0.1 mg/m³
	Ceiling Values - TWA PEL		

US. ACGIH Threshold Limit Values (2022):

Identification	Occupational exposure limits		
N-butyl acetate CAS: 123-86-4	TLV-TWA	20 ppm	
	TLV-STEL		
Xylene (1) CAS: 1330-20-7	TLV-TWA	100 ppm	
	TLV-STEL	150 ppm	
Ethylbenzene (1) CAS: 100-41-4	TLV-TWA	20 ppm	
	TLV-STEL		
Dibutyltin Dilaurate CAS: 77-58-7	TLV-TWA		0.1 mg/m³
	TLV-STEL		0.2 mg/m³
Hexamethylene-di-isocyanate CAS: 822-06-0	TLV-TWA	0.005 ppm	
	TLV-STEL		

CALIFORNIA- TABLE AC-1 PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS:

Identification	Occupational exposure limits		
N-butyl acetate CAS: 123-86-4	PEL	150 ppm	710 mg/m³
	STEL	200 ppm	950 mg/m³
Xylene (1) CAS: 1330-20-7	PEL	100 ppm	435 mg/m³
	STEL	150 ppm	655 mg/m³
Ethylbenzene (1) CAS: 100-41-4	PEL	5 ppm	22 mg/m³
	STEL	30 ppm	130 mg/m³
Dibutyltin Dilaurate CAS: 77-58-7	PEL		0.1 mg/m³
	STEL		
Hydrocarbons, C9, aromatics CAS: 64742-95-6	PEL	400 ppm	1600 mg/m³
	STEL		
Hexamethylene-di-isocyanate CAS: 822-06-0	PEL	0.005 ppm	0.034 mg/m³
	STEL		

NIOSH: Immediately Dangerous To Life or Health (IDLH) Values:

Identification	Occupational exposure limits		
N-butyl acetate CAS: 123-86-4	TWA		
	IDLH Value	1700 ppm	
Ethylbenzene (1) CAS: 100-41-4	TWA		
	IDLH Value	800 ppm	
Dibutyltin Dilaurate CAS: 77-58-7	TWA		
	IDLH Value		25 mg/m³

(1) Skin

Biological limit values:

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Biological Exposure Indices (BEIs®) - ACGIH

Identification	BEIs®	Determinant	Sampling Time
Xylene CAS: 1330-20-7	1500 mg/g (Creatinine)	Methylhippuric acids in urine	End of shift
Ethylbenzene CAS: 100-41-4	150 mg/g (Creatinine)	Sum of mandelic acid and phenylglyoxylic acid in urine	End of shift
Hexamethylene-di-isocyanate CAS: 822-06-0	0.015 mg/g (Creatinine)	1,6-Hexamethylene diamine in urine	End of shift

8.2 Appropriate engineering controls:

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

Always provide effective general and, when necessary, local exhaust ventilation to maintain the ambient workplace atmosphere below the exposure limits.. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional information see subsection 7.1. All information contained herein is a recommendation, the information on clothing performance must be combined with professional judgment, and a clear understanding of the clothing application, to provide the best protection to the worker. All chemical protective clothing use must be based on a hazard assessment to determine the risks for exposure to chemicals and other hazards. Conduct hazard assessments in accordance with 29 CFR 1910.132.

B.- Respiratory protection

Pictogram	PPE	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours (Filter type: A)	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. Use respirator in accordance with manufacturer´s use limitations and OSHA standard 1910.134 (29CFR)

C.- Specific protection for the hands

Pictogram	PPE	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Linear low -density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 mm)	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin. Use gloves in accordance with manufacturer´s use limitations and OSHA standard 1910.138 (29CFR)

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. Use this PPE in accordance with manufacturer´s use limitations and OSHA standard 1910.133 (29CFR)

E.- Bodily protection

Pictogram	PPE	Remarks
 Mandatory complete body protection	Antistatic and fireproof protective clothing	Limited protection against flames.
 Mandatory foot protection	Safety footwear with antistatic and heat resistant properties	Replace boots at any sign of deterioration. Use foot protection in accordance with manufacturer´s use limitations and OSHA standard 1910.136 (29CFR)

F.- Additional emergency measures

It is advised to implement additional emergency equipments in workplaces that are particularly exposed to the product or in situations where risk assessments highlight the necessity of such equipments.

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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:

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to subsection 7.1.D.

40 CFR Part 59 (VOC):

V.O.C.(weight-percent): 73.58 % weight

V.O.C. at 68 ºF: 699.03 kg/m³ (699.03 g/L)

California Air Resources Board (CARB) - VOC Regulatory:

V.O.C.(weight-percent): 73.58 % weight

V.O.C. at 68 ºF: 699.03 kg/m³ (699.03 g/L)

South Coast Air Quality Management District (AQMD) - VOC Regulatory:

V.O.C.(weight-percent): 73.58 % weight

V.O.C. at 68 ºF: 699.03 kg/m³ (699.03 g/L)

Ozone Transport Commission (OTC) Rules - VOC Regulatory:

V.O.C.(weight-percent): 73.58 % weight

V.O.C. at 68 ºF: 699.03 kg/m³ (699.03 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 68 ºF:	Liquid
Appearance:	Fluid
Color:	Colorless
Odor:	Characteristic
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	270 ºF
Vapour pressure at 68 ºF:	992 Pa
Vapour pressure at 122 ºF:	5040.51 Pa (5.04 kPa)
Evaporation rate at 68 ºF:	Non-applicable *

Product description:

Density at 68 ºF:	950 kg/m³
Relative density at 68 ºF:	0.95
Dynamic viscosity at 68 ºF:	64 mPa·s
Kinematic viscosity at 68 ºF:	Non-applicable *
Kinematic viscosity at 104 ºF:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 68 ºF:	Non-applicable *
Partition coefficient n-octanol/water 68 ºF:	Non-applicable *

*Non-applicable 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)

Solubility in water at 68 ºF:	Non-applicable *
Solubility properties:	Immiscible
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Flammability:	
Flash Point:	74 ºF
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	790 ºF
Lower flammability limit:	Non-applicable *
Upper flammability 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 68 ºF:	Non-applicable *
Refraction index:	Non-applicable *

*Non-applicable 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 from Safety Data Sheet.

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	Risk of combustion	Avoid direct impact	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 (CO_2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

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, as it does not contain substances classified as hazardous for consumption. For more information see section 3
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

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

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

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

- Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.
- 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:

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

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

- Specific target organ toxicity (STOT)-repeated exposure: Exposure in high concentration can cause a breakdown in the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness. Organs affected: All gross lesions and masses, Hearing organs.
- Skin: Based on available data, the classification criteria are not met, however, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.

H- Aspiration hazard:

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.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
N-butyl acetate CAS: 123-86-4	LD50 oral	12789 mg/kg	Rat
	LD50 dermal	14112 mg/kg	Rabbit
	LC50 inhalation vapour	23.4 mg/L (4 h)	Rat
Xylene CAS: 1330-20-7	LD50 oral	2100 mg/kg	Rat
	LD50 dermal	1100 mg/kg	Rat
	LC50 inhalation vapour	17 mg/L	Rat

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Genus
Ethylbenzene CAS: 100-41-4	LD50 oral	3500 mg/kg	Rat
	LD50 dermal	15354 mg/kg	Rabbit
	LC50 inhalation vapour	17.2 mg/L	Rat
Hexamethylene diisocyanate, oligomers (<0.1 % O=C=N-R-N=C=O) CAS: 28182-81-2	LD50 oral	2660 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation vapour	11 mg/L	
Hydrocarbons, C9, aromatics CAS: 64742-95-6	LD50 oral	>3492 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation vapour	>20 mg/L	

Acute Toxicity Estimate (ATE mix):

ATE mix		Ingredient(s) of unknown toxicity
Oral	3685.93 mg/kg (Calculation method)	0 %
Dermal	3741.5 mg/kg (Calculation method)	0 %
LC50 inhalation vapour	21.3 mg/L (4 h) (Calculation method)	0 %

SECTION 12: ECOLOGICAL INFORMATION

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

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.

12.1 Ecotoxicity (aquatic and terrestrial, where available):

Acute toxicity:

Identification	Concentration		Species	Genus
N-butyl acetate CAS: 123-86-4	LC50	Non-applicable		
	EC50	Non-applicable		
	EC50	675 mg/L (72 h)	Scenedesmus subspicatus	Algae
Xylene CAS: 1330-20-7	LC50	>10 - 100 mg/L (96 h)		Fish
	EC50	>10 - 100 mg/L (48 h)		Crustacean
	EC50	>10 - 100 mg/L (72 h)		Algae
Hexamethylene diisocyanate, oligomers (<0.1 % O=C=N-R-N=C=O) CAS: 28182-81-2	LC50	Non-applicable		
	EC50	Non-applicable		
	EC50	1000 mg/L (72 h)	Scenedesmus subspicatus	Algae
Ethylbenzene CAS: 100-41-4	LC50	42.3 mg/L (96 h)	Pimephales promelas	Fish
	EC50	75 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	63 mg/L (3 h)	Chlorella vulgaris	Algae
Hydrocarbons, C9, aromatics CAS: 64742-95-6	LC50	>1 - 10 mg/L (96 h)		Fish
	EC50	>1 - 10 mg/L (48 h)		Crustacean
	EC50	>1 - 10 mg/L (72 h)		Algae

Chronic toxicity:

Identification	Concentration		Species	Genus
N-butyl acetate	NOEC	Non-applicable		
CAS: 123-86-4	NOEC	23.2 mg/L	Daphnia magna	Crustacean
Xylene	NOEC	1.3 mg/L	Oncorhynchus mykiss	Fish
CAS: 1330-20-7	NOEC	1.17 mg/L	Ceriodaphnia dubia	Crustacean
Ethylbenzene	NOEC	Non-applicable		
CAS: 100-41-4	NOEC	0.96 mg/L	Ceriodaphnia dubia	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

- CONTINUED ON NEXT PAGE -



SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Degradability		Biodegradability	
N-butyl acetate	BOD5	Non-applicable	Concentration	Non-applicable
CAS: 123-86-4	COD	Non-applicable	Period	5 days
	BOD5/COD	Non-applicable	% Biodegradable	84 %
Xylene	BOD5	Non-applicable	Concentration	Non-applicable
CAS: 1330-20-7	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	88 %
Ethylbenzene	BOD5	Non-applicable	Concentration	100 mg/L
CAS: 100-41-4	COD	Non-applicable	Period	14 days
	BOD5/COD	Non-applicable	% Biodegradable	90 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
N-butyl acetate	BCF	4
CAS: 123-86-4	Pow Log	1.78
	Potential	Low
Xylene	BCF	9
CAS: 1330-20-7	Pow Log	2.77
	Potential	Low
Ethylbenzene	BCF	1
CAS: 100-41-4	Pow Log	3.15
	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
N-butyl acetate	Koc	Non-applicable	Henry	Non-applicable
CAS: 123-86-4	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2.478E-2 N/m (77 ºF)	Moist soil	Non-applicable
Xylene	Koc	202	Henry	524.86 Pa·m³/mol
CAS: 1330-20-7	Conclusion	Moderate	Dry soil	Yes
	Surface tension	Non-applicable	Moist soil	Yes
Ethylbenzene	Koc	520	Henry	798.44 Pa·m³/mol
CAS: 100-41-4	Conclusion	Moderate	Dry soil	Yes
	Surface tension	2.859E-2 N/m (77 ºF)	Moist soil	Yes

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:

The next characteristic per RCRA could apply to the unused product if it becomes a waste material: Ignitability. The next EPA hazardous waste number could apply: D001.
IT IS THE RESPONSIBILITY OF THE WASTE GENERATOR TO EVALUATE WHETHER HIS WASTES ARE HAZARDOUS BY CHARACTERISTICS OR LISTING.

Waste management (disposal and evaluation):

Follow RCRA framework and EPA regulation for to ensure that hazardous waste is managed safely and properly.Waste should not be disposed of to drains. Remind, It is the responsibility of the waste generator to evaluate whether his wastes are hazardous by characteristics or listing.See section 6 for further information about Accidental release measures.

Regulations related to waste management:

Legislation related to waste management:

- CONTINUED ON NEXT PAGE -



SECTION 13: DISPOSAL CONSIDERATIONS (continued)

40 CFR Solid Wastes - Part 239 through 282.
State regulatory requirements for generators may be more stringent than those in the federal program. Be sure to check the state´s policies.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to 49 CFR on the Transport of Dangerous Goods:



14.1	**UN number:**	UN1263
14.2	**UN proper shipping name:**	PAINT RELATED MATERIAL
14.3	**Transport hazard class(es):**	3
	Labels:	3
14.4	**Packing group, if applicable:**	III
14.5	**Marine pollutant:**	No
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
	Limited quantities:	5 L
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 41-22:



14.1	**UN number:**	UN1263
14.2	**UN proper shipping name:**	PAINT RELATED MATERIAL
14.3	**Transport hazard class(es):**	3
	Labels:	3
14.4	**Packing group, if applicable:**	III
14.5	**Marine pollutant:**	No
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:	163, 223, 955, 367
	EmS Codes:	F-E, S-E
	Physico-Chemical properties:	see section 9
	Limited quantities:	5 L
	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 2025:



14.1	**UN number:**	UN1263
14.2	**UN proper shipping name:**	PAINT RELATED MATERIAL
14.3	**Transport hazard class(es):**	3
	Labels:	3
14.4	**Packing group, if applicable:**	III
14.5	**Marine pollutant:**	No
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

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SECTION 15: REGULATORY INFORMATION

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

- CALIFORNIA LABOR CODE - The Hazardous Substances List: *N-butyl acetate (123-86-4)* ; *Xylene (1330-20-7)* ; *Ethylbenzene (100-41-4)*
- California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986) - Birth defects or other reproductive harm: Non-applicable
- California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986) - Cancer: *Ethylbenzene (100-41-4)*
- CANADA-Domestic Substances List (DSL): *N-butyl acetate (123-86-4)* ; *Xylene (1330-20-7)* ; *Hexamethylene diisocyanate, oligomers (<0.1 % O=C=N-R-N=C=O) (28182-81-2)* ; *Ethylbenzene (100-41-4)* ; *Hydrocarbons, C9, aromatics (64742-95-6)*
- CANADA-Non-Domestic Substances List (NDSL): Non-applicable
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantities: *N-butyl acetate (123-86-4) - 5000 lb* ; *Xylene (1330-20-7) - U239* ; *Ethylbenzene (100-41-4) - 1000 lb*
- Hazardous Air Pollutants (Clean Air Act): *Xylene (1330-20-7)* ; *Ethylbenzene (100-41-4)*
- Massachusetts RTK - Substance List: *N-butyl acetate (123-86-4)* ; *Xylene (1330-20-7)* ; *Hexamethylene diisocyanate, oligomers (<0.1 % O=C=N-R-N=C=O) (28182-81-2)* ; *Ethylbenzene (100-41-4)*
- Minnesota - Hazardous substances ERTK: *N-butyl acetate (123-86-4)* ; *Xylene (1330-20-7)* ; *Ethylbenzene (100-41-4)*
- New Jersey Worker and Community Right-to-Know Act: *N-butyl acetate (123-86-4)* ; *Xylene (1330-20-7)* ; *Ethylbenzene (100-41-4)*
- New York RTK - Substance list: *N-butyl acetate (123-86-4)* ; *Xylene (1330-20-7)* ; *Ethylbenzene (100-41-4)*
- NTP (National Toxicology Program): Non-applicable
- OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096): Non-applicable
- Pennsylvania Worker and Community Right-to-Know Law: *Hydrocarbons, C9, aromatics (64742-95-6)*
- Protective Action Criteria (PAC) with AEGLs, ERPGs, & TEELs: *N-butyl acetate (123-86-4)* ; *Xylene (1330-20-7)* ; *Hexamethylene diisocyanate, oligomers (<0.1 % O=C=N-R-N=C=O) (28182-81-2)* ; *Ethylbenzene (100-41-4)*
- Rhode Island - Hazardous substances RTK: *N-butyl acetate (123-86-4)* ; *Xylene (1330-20-7)* ; *Ethylbenzene (100-41-4)*
- SB-258 Cleaning Product Right to Know Act : *Ethylbenzene (100-41-4)* ; *Hydrocarbons, C9, aromatics (64742-95-6)*
- The Toxic Substances Control Act (TSCA) : *N-butyl acetate (123-86-4)* ; *Xylene (1330-20-7)* ; *Hexamethylene diisocyanate, oligomers (<0.1 % O=C=N-R-N=C=O) (28182-81-2)* ; *Ethylbenzene (100-41-4)*
- Toxic chemical release reporting under EPCRA section 313 (40 CFR Part 372): *Xylene (1330-20-7)* ; *Ethylbenzene (100-41-4)*

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information provided in this safety data sheet as a foundation for conducting workplace-specific risk assessments. These assessments will help establish the appropriate risk prevention measures for handling, using, storing, and disposing of this product.

Other legislation:

Take into consideration other applicable federal, state, and local laws and local regulations.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Appendix d to §1910.1200 - Safety data sheets

Texts of the legislative phrases mentioned in section 2:

H336: May cause drowsiness or dizziness.
H335: May cause respiratory irritation.
H315: Causes skin irritation.
H373: May cause damage to organs through prolonged or repeated exposure (Oral). Organs affected: All gross lesions and masses.
H351: Suspected of causing cancer.
H373: May cause damage to organs through prolonged or repeated exposure (Inhalation). Organs affected: Hearing organs, All gross lesions and masses.
H317: May cause an allergic skin reaction.
H226: Flammable liquid and vapour.
H319: Causes serious eye irritation.

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

29 CFR 1910.1200:

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SECTION 16: OTHER INFORMATION (continued)

Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled.
Acute Tox. 4: H332 - Harmful if inhaled.
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.
Carc. 2: H351 - Suspected of causing cancer.
Eye Irrit. 2A: H319 - Causes serious eye irritation.
Flam. Liq. 2: H225 - Highly flammable liquid and vapour.
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 (Inhalation).
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Oral).
STOT SE 3: H335 - May cause respiratory irritation.
STOT SE 3: H336 - May cause drowsiness or dizziness.

Advice related to training:

According to 29 CFR 1910. 1200, training on chemical hazards is necessary for employees using this product. This training will facilitate their understanding and interpretation of the safety data sheet, as well as the product label.

Principal bibliographical sources:

Occupational Safety & Health Administration (OSHA).

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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END OF SAFETY DATA SHEET