

## SAFETY DATA SHEET

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

**1.1. Product identifier** FLEXRICIN\* 50

**Synonyms:** {phrase:00\_NOTAVL}

**Chemical Abstracts Registry No:** 68604-47-7

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

chemical intermediate  
plasticizer  
chemical intermediate under strictly controlled conditions  
Plasticizer

**1.3. Details of the supplier of the safety data sheet**

Vertellus LLC  
201 North Illinois Street, Suite 1800  
Indianapolis, Indiana 46204 USA  
1-201-858-7900

**e-mail Address:** sds@vertellus.com

**1.4. Emergency telephone number** **Vertellus:** 1-201-858-7900  
**CHEMTREC (USA):** +1-800-424-9300 (collect calls accepted)  
**CHEMTREC (International):** +1-703-527-3887 (collect calls accepted)  
**NRCC (China):** +86 532 83889090

### SECTION 2: Hazards identification

**2.1. Classification of the substance or mixture** (According to Regulation (EC) No 1272/2008, 29 CFR 1910.1200 and the Globally Harmonized System)

Skin Irritation Category 2

**2.2. Label elements**

**Hazard Symbols (Pictogram):**



**Signal Word:** Warning

**Hazard Precautions:** H315 - Causes skin irritation.

**Prevention Precautionary Statements:** P264 - Wash hands thoroughly after handling.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

**First Aid Precautionary Statements:** P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P362 - Take off contaminated clothing and wash before reuse.

**Storage Precautionary Statements:** Not required.

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Disposal Precautionary Statements: Not required.

### 2.3. Other hazards

Other Hazards: Not applicable.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances or 3.2. Mixtures

Ingredient	CAS Number	Concentration (weight %)	EC Number	CLP Inventory/ Annex VI	EU CLP Classification (1272/2008)
Propylene glycol monoricinoleate	68604-47-7	~ 100	none - polymer	Not listed.	Skin Irrit. 2; H315

NOTE: See Section 8 for exposure limit data for these ingredients. See Section 15 for trade secret information (where applicable).

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- Skin Contact:** Wash thoroughly after skin contact.
- Eye Contact:** Immediately flush the eyes with plenty of water for at least 15 minutes. Call a physician.
- Inhalation:** Remove from exposure. If not breathing, give artificial respiration and call a physician.
- Ingestion:** If swallowed, do not induce vomiting. Get prompt medical attention. Do not give anything by mouth to an unconscious person.

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

- Acute:** Contact with this product may cause mild irritation to skin, eyes and mucous membranes. No dermal reactions were observed in a 48-hour human patch test. This product is not expected to be toxic by inhalation, ingestion or dermal exposure. Although it has been observed that health effects related to this substance are minimal, as with any chemical, use appropriate precautions during handling.
- Delayed Effects:** None known.

### 4.3. Indication of any immediate medical attention and special treatment needed

- Note to Physician:** No specific indications. Treatment should be based on the judgment of the physician in response to the reactions of the patient.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Appropriate Extinguishing Media:** Water fog, foam, carbon dioxide, or dry chemical

### 5.2. Special hazards arising from the substance or mixture

- Hazardous Products of Combustion:** As with other organic materials, combustion will produce carbon monoxide and carbon dioxide.
- Potential for Dust Explosion:** Not applicable.

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**Special Flammability Hazards:** Not applicable.

### **5.3. Advice for firefighters**

**Basic Fire Fighting Guidance:** Wear self-contained breathing apparatus and full protective clothing (i.e., Bunker gear). Skin and eye contact should be avoided. Normal fire fighting procedures may be used.

## SECTION 6: Accidental release measures

### **6.1. Personal precautions, protective equipment and emergency procedures**

**Evacuation Procedures:** Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

**Special Instructions:** See Section 8 for personal protective equipment recommendations. Remove all contaminated clothing to prevent further absorption. Decontaminate affected personnel using the first aid procedures in Section 4. Leather shoes that have been saturated must be discarded.

### **6.2. Environmental precautions**

Prevent releases to soils, drains, sewers and waterways.

### **6.3. Methods and material for containment and cleaning up**

Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Remove all ignition sources. Ventilate the area of spill or leak. Wear protective equipment during clean-up. For small spills, use suitable absorbent material and collect for later disposal. For large spills, the area may require diking to contain the spill. Material can then be collected (eg., suction) for later disposal. After collection of material, flush area with water. Dispose of the material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws.

### **6.4. Reference to other sections**

Refer to section 8 for information on selecting personal protective equipment. Refer to section 13 for information on spilled product, absorbent and clean up material disposal instructions.

## SECTION 7: Handling and storage

### **7.1. Precautions for safe handling**

**Precautions for Unique Hazards:** Not applicable.

**Practices to Minimize Risk:** Wear appropriate protective equipment when performing maintenance on contaminated equipment. Wash hands thoroughly before eating or smoking after handling this material. Do not eat, drink or smoke in work areas. Prevent contact with incompatible materials. Avoid spills and keep away from drains. Handle in a manner to prevent generation of aerosols, vapors or dust clouds. Wear appropriate protective equipment when performing maintenance on contaminated equipment.

**Special Handling Equipment:** Not applicable.

### **7.2. Conditions for safe storage, including any incompatibilities**

**Storage Precautions & Recommendations:** This product should be stored at ambient temperature in a dry, well-ventilated location. Keep container closed when not in use.

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**Dangerous Incompatibility Reactions:** Incompatible with oxidizing materials.

**Incompatibilities with Materials of Construction:** None known

### 7.3. Specific end use(s)

If a chemical safety assessment has been completed an exposure scenario is attached as an annex to this Safety Data Sheet. Refer to this annex for the specific exposure scenario control parameters for uses identified in subsection 1.2.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**Country**

Not established

**Occupational Exposure Limit**

Not established

**Air Monitoring Method:** Not required

**Derived No Effect Levels (DNELs) – Workers:**

Route

DNEL

**Derived No Effect Levels (DNELs) – General Population:**

Route

DNEL

**Predicted No Effect Concentrations (PNECs):**

Route

PNEC

### 8.2. Exposure controls

Also see the annex to this SDS (if applicable) for specific exposure scenario controls.

**Other Engineering Controls:** All operations should be conducted in well-ventilated conditions. Local exhaust ventilation should be provided.

**Personal Protective Equipment:** Where overexposures are a concern, use NIOSH-approved chemical cartridge respirator or supplied-air breathing equipment as necessary. Safety glasses or chemical goggles. Work uniforms or impervious clothing and boots. Latex rubber gloves are recommended where contact is likely.

**Respirator Caution:** Observe OSHA regulations for respirator use (29 CFR 1910.134). Air-purifying respirators must not be used in oxygen-deficient atmospheres.

**Thermal Hazards:** Not applicable.

**Environmental Exposure Controls:** The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**Appearance, State & Odor** Clear pale yellow to amber liquid with mild odor.

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(ambient temperature):

<b>Molecular Formula:</b>	Not determined	<b>Molecular Weight:</b>	No data available.
<b>Vapor Pressure:</b>	No data available.	<b>Evaporation Rate:</b>	< 1 (Butyl Acetate = 1)
<b>Specific Gravity or Density:</b>	No data available.	<b>Vapor Density (air = 1):</b>	No data available.
<b>Boiling Point:</b>	230 - 250 °C @ 760 mm Hg	<b>Freezing / Melting Point:</b>	-32 °C- 32 °C
<b>Solubility in Water:</b>	insoluble	<b>Octanol / Water Coefficient:</b>	No data available.
<b>pH:</b>	No data available.	<b>Odor Threshold:</b>	No data available.
<b>Viscosity:</b>	No data available.	<b>Autoignition Temperature:</b>	No data available.
<b>Flash Point and Method:</b>	435 - 480°F (224 - 249°C) COC	<b>Flammable Limits:</b>	No data available. (LEL) – (UEL)
<b>Flammability (solid, gas):</b>	No data available.	<b>Decomposition Temperature:</b>	No data available.
<b>Explosive Properties:</b>	Not explosive.	<b>Oxidizing Properties:</b>	Not an oxidizer.

### 9.2. Other information

Not applicable.

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	Not classified as dangerously reactive.
<b>10.2. Chemical stability</b>	Stable
<b>10.3. Possibility of hazardous reactions</b>	Not prone to hazardous polymerization
<b>10.4. Conditions to avoid</b>	Avoid static discharge and uncontrolled exposure to high temperatures.
<b>10.5. Incompatible materials</b>	Incompatible with oxidizing materials.
<b>10.6. Hazardous decomposition products</b>	carbon monoxide; Carbon dioxide

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

<b>Acute Oral LD<sub>50</sub>:</b>	Oral LD <sub>50</sub> (rat) > 5000 mg/kg	Propylene glycol monoricinoleate
<b>Acute Dermal LD<sub>50</sub>:</b>	No data available.	
<b>Acute Inhalation LC<sub>50</sub>:</b>	No data available.	
<b>Skin Irritation:</b>	Moderately irritating to skin.	
<b>Eye Irritation:</b>	Non-irritating to eyes.	
<b>Skin Sensitization:</b>	No data available.	

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<b>Mutagenicity:</b>	No data available.
<b>Reproductive / Developmental Toxicity:</b>	No data available.
<b>Carcinogenicity:</b>	This material is not listed by IARC, NTP or OSHA as a carcinogen. No test data is available that indicates this material is a carcinogen.
<b>Target Organs:</b>	None known
<b>Aspiration Hazard:</b>	Not an aspiration hazard.
<b>Primary Route(s) of Exposure:</b>	Skin contact and absorption, eye contact, and inhalation. Ingestion is not likely to be a primary route of exposure.
<b>Most important symptoms and effects, both acute and delayed</b>	Contact with this product may cause mild irritation to skin, eyes and mucous membranes. No dermal reactions were observed in a 48-hour human patch test. This product is not expected to be toxic by inhalation, ingestion or dermal exposure. Although it has been observed that health effects related to this substance are minimal, as with any chemical, use appropriate precautions during handling. Delayed Effects: None known.
<b>Additive or Synergistic effects:</b>	None known.
<b>Additional Toxicity Information:</b>	No signs of allergic dermatitis in guinea pigs.

### SECTION 12: Ecological information

<b><u>12.1. Toxicity</u></b>	No data available.
<b><u>12.2. Persistence and degradability</u></b>	No data available
<b><u>12.3. Bioaccumulative potential</u></b>	No data available
<b><u>12.4. Mobility in soil</u></b>	No data available
<b><u>12.5. Results of PBT and vPvB assessment</u></b>	No data available.
<b><u>12.6. Other adverse effects</u></b>	No data available.

### SECTION 13: Disposal considerations

#### **13.1. Waste treatment methods**

<b>US EPA Waste Number:</b>	Non-Hazardous
<b>Waste Classification: (per US regulations)</b>	The waste may be classified as "special" or hazardous per State regulations.
<b>Waste Disposal:</b>	NOTE: Generator is responsible for proper waste characterization. State hazardous waste regulations may differ substantially from federal regulations. Dispose of this material responsibly, and in accordance with standard practice for disposal of potentially hazardous materials as required by applicable international, national, regional, state or local laws, and environmental protection duty of care principles. Do NOT dump into any sewers, on the ground, or into any body of water. For disposal within the EC, the appropriate classification code according to the European Community List of Wastes should be used. Note that disposal regulations may also apply to empty containers and equipment rinsates.

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### SECTION 14: Transport information

The following information applies to all shipping modes (DOT/IATA/ICAO/IMDG/ADR/RID/ADN), unless otherwise indicated:

14.1. UN number	Not applicable	14.2. UN proper shipping name	Chemicals, n.o.s. (Fatty acids, castor-oil, polymerized)
14.3. Transport hazard class(es)	Not applicable	14.4. Packing group	Not applicable
14.5. Environmental hazards	Not applicable		
NA Emergency Guidebook Numbers:	Not applicable	IMDG EMS:	Not applicable;
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code			Not applicable.

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

<b>Chemical Inventory Lists:</b>	<b>Status:</b>		
USA TSCA:	Listed XU	EINECS:	Listed
Canada(DSL/NDSL):	DSL	Japan:	8-334X
Korea:	KE-14525	Australia:	Listed
China:	Listed	Philippines:	Listed
Taiwan:	Listed	New Zealand:	Not listed.
German Water Hazard Classification:	No data available. ()		
SARA 313:	Not listed.		
Reportable Quantities:	Not applicable		
State Regulations:	Not applicable.		
Other Regulatory Listings:	Not applicable.		
HMIS IV:		NFPA:	
HEALTH	1		
FLAMMABILITY	1		
PHYSICAL HAZARD	0		

#### 15.2. Chemical safety assessment

Not applicable.

### SECTION 16: Other information

#### Legend of Abbreviations:

ACGIH = American Conference on Governmental Industrial Hygienists.  
CAS = Chemical Abstracts Service.  
CFR = Code of Federal Regulations.  
DSL/NDSL = Domestic Substances List/Non-Domestic Substances List.  
EC = European Community.

LD = Lethal Dose.  
NFPA = National Fire Protection Association.  
NIOSH = National Institute of Occupational Safety and Health.  
NTP = National Toxicology Program.  
OSHA = Occupational Safety and Health Administration

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EINECS = European Inventory of Existing Commercial Chemical Substances.

ELINCS = European List of Notified Chemical Substances.

EU = European Union.

GHS = Globally Harmonized System.

LC = Lethal Concentration.

PEL = Permissible Exposure Limit.

RQ = Reportable Quantity.

SARA = Superfund Amendments and Reauthorization Act of 1986.

TLV = Threshold Limit Value.

WHMIS = Workplace Hazardous Materials Information System.

**Important Note:** Please note that the information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. The information contained herein may change without prior notice. THIS SAFETY DATA SHEET SUPERSEDES ALL PREVIOUS EDITIONS.

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