

**1. Product and Company Identification**

<b>Name of the product</b>	UR 101 Retarder
<b>Identifier of the product</b>	Sigma UR 101
<b>Uses recommended and restrictions</b>	Retarder for Pad Printing Ink
<b>Data of the manufacturer</b>	Sigma Inks (USA) 12800 Brookprinter place, Poway, CA 92064 USA Telephone: (888) 424-9300 Website: <a href="http://www.sigmainsks.com">www.sigmainsks.com</a> Contact to the distributor: <a href="http://www.printexusa.com">www.printexusa.com</a>
<b>Emergency telephone number</b>	Chemtrec (And.Or.): (800) 424-9300 Chemtrec Out: (703) 527-3887 ( collect calls)

**2. Hazards identification**

**GHS classification in accordance with 29 CFR 1910.1200**

Flammable liquids	:Category 4
Acute toxicity (Oral)	:Category 4
Acute toxicity (Inhalation)	:Category 4
Acute toxicity (Inhalation)	:Category 4
Acute toxicity (Dermal)	:Category 4

**GHS label elements**

**Identification of the substance or mix** UR 101 Retarder



**Signal Word** Warning

**Hazard Statements**  
 H227 Combustible liquid.  
 H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.  
 H373 May cause damage to organs through prolonged or repeated exposure.

**Precautionary Statements**

Prevention:  
 P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
 P264 Wash skin thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/ eye protection/ face protection.  
 Response:  
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.  
 P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell.

P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.  
 P363 Wash contaminated clothing before reuse.  
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
 Storage:  
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P403 + P235 Store in a well-ventilated place. Keep cool.  
 P405 Store locked up.  
 Disposal:  
 P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**  
 None known.

**3. Composition/information on ingredients**

**Ingredients**

Chemical identity of the substance	Common or synonymous name	Number CAS	Impurities and additives	Percentage
Ethylene glycol monobutyl ether acetate	Ether monobutyllic of ethyleneglycol	112-07-2	1	90-100%
any concentration that shows like a rank is due to the variation of the batch.				

**4. First aid measures**

If inhaled : Remove to fresh air.  
 If not breathing, give artificial respiration.  
 If breathing is difficult, give oxygen.  
 Get immediate medical advice/ attention.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.  
 Take off contaminated clothing and shoes immediately.  
 Wash contaminated clothing before re-use.  
 Get medical advice/ attention.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed : Seek medical advice.

Most important symptoms and effects, both acute and delayed : None known.

Notes to physician : Treat symptomatically

**5. Fire-fighting measures**

Suitable extinguishing media : Use water spray to extinguish.  
 Dry chemical  
 Carbon dioxide (CO2)  
 Foam

Unsuitable extinguishing media : None known.

Specific hazards during fire fighting : Forms peroxides of unknown stability.

Hazardous combustion products : No hazardous combustion products are known.

Further information : Combustible liquid and vapor.

**6. Accidental release measures**

Personal precautions, protective equipment and emergency procedures : Wear appropriate personal protective equipment.  
 Local authorities should be advised if significant spillages cannot be contained.

Environmental precautions : Avoid release to the environment.

Methods and materials for containment and cleaning up : Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

**7. Handling and storage**

Advice on safe handling	: Avoid breathing mist or vapors. Avoid contact with skin. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling. Minimize exposure to air. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage.
Conditions for safe storage	: Keep container tightly closed in a dry and well-ventilated place.

**8. Exposure controls/personal protection**

**Ingredients with workplace control parameters**

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ethylene glycol monobutyl ether acetate	112-07-2	TWA	25 ppm	Eastman Chemical Company occupational exposure limit



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		TWA	20 ppm	ACGIH
		TWA	5 ppm 33 mg/m <sup>3</sup>	NIOSH REL

**Engineering measures** : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### Personal protective equipment

Respiratory protection : Wear respiratory protection.

Hand protection

Remarks : Wear suitable gloves.

Eye protection : Wear safety glasses with side shields (or goggles).

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

Appearance : liquid  
Color : colorless  
Odor : mild  
Odor Threshold : not determined  
pH : not determined  
Melting point/freezing point : -84.3 °F / -64.6 °C  
Boiling point/boiling range : 367 °F / 186 °C  
Flash point : 160 °F / 71 °C  
 : Method: Tag closed cup  
Evaporation rate : 0.03  
Self-ignition : 644 °F / 340 °C  
 : Method: ASTM D2155  
Vapor pressure : 0.39 mbar (68 °F / 20 °C)  
Relative vapor density : 5.5  
Relative density : 0.94 (68 °F / 20 °C)  
Solubility(ies)  
Water solubility : 1 g/l slightly soluble  
Partition coefficient: n-octanol/water : No data available

Autoignition temperature : not determined

Decomposition temperature : 379 °F / 193 °C  
Method: DTA  
No exothermic

Viscosity

Viscosity, dynamic : 1.8 mPa.s (68 °F / 20 °C)

Viscosity, kinematic : 1.91 mm<sup>2</sup>/s (68 °F / 20°C)

Flammability Explosive Limits : Upper/Lower Explosion  
8.54 % (V)  
0.88 % (V)

Oxidizing properties : No data available

### 10. Stability and reactivity

Reactivity : Stable  
Chemical stability : Stable under normal conditions.  
Possibility of hazardous reactions : Forms peroxides of unknown stability.  
Conditions to avoid : Heat, flames and sparks  
Incompatible materials : Strong oxidizing agents  
Hazardous decomposition products : Carbon dioxide (CO<sub>2</sub>)  
Carbon monoxide

### 11. Toxicological information

#### Acute toxicity

Harmful if swallowed, in contact with skin or if inhaled.

#### Product:

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

#### Ingredients:

2-butoxyethyl acetate:

Acute oral toxicity : LD50 Oral (Rat, Male and Female): 1,880 mg/kg



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Acute inhalation toxicity : LC50 (Rat): 7.82 mg/l, > 450 ppm  
Exposure time: 4 h  
Test atmosphere: vapor  
Remarks: (highest concentration obtainable)

LC50 (Rat): > 4.59 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor

Acute dermal toxicity : LD50 Dermal (Rabbit): 1,500 mg/kg

### **Skin corrosion/irritation**

Not classified based on available information.

#### **Product:**

Remarks : No data available

#### **Ingredients:**

2-butoxyethyl acetate:

Species : Guinea pig  
Exposure time : 72 h  
Result : very slight

### **Serious eye damage/eye**

#### **irritation**

Not classified based on available information.

#### **Product:**

Remarks : No data available

#### **Ingredients:**

2-butoxyethyl acetate:

Species : Rabbit  
Result : slight

### **Respiratory or skin sensitization**

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

#### **Product:**

Remarks : No data available

#### **Ingredients:**

2-butoxyethyl acetate:

Test Type : Skin Sensitization  
Species : Guinea pig  
Result : non-sensitizing



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### Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

### Product:

Remarks : This information is not available.  
IARC : No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
OSHA : No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.  
NTP : No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### Reproductive toxicity

Not classified based on available information.

### Product:

Effects on fertility : Remarks: No data available

STOT-single exposure

Not classified based on available information.

Product:

Remarks

### STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

### Product:

Remarks : No data available

### Ingredients:

2-butoxyethyl acetate:

Routes of exposure : Inhalation

Target Organs : Kidney

### Aspiration toxicity

Not classified based on available information.

### Product:

No data available

### **Information on likely routes of exposure**

#### Product:

Inhalation : Remarks: Harmful if inhaled.

Skin contact : Remarks: Harmful in contact with skin.



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Eye contact : Remarks: None known.  
Ingestion : Remarks: Harmful if swallowed.

### 12. Ecological information

#### Ecotoxicity Ingredients:

##### 2-butoxyethyl acetate:

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)): 20 - 40 mg/l  
Exposure time: 96 h  
Toxicity to daphnia and other aquatic invertebrates EC50 (daphnid): 37 mg/l  
Exposure time: 48 h  
Toxicity to algae EC50 (Pseudokirchneriella subcapitata (algae)): 1,570 mg/l  
Exposure time: 72 h

#### Persistence and degradability

##### Ingredients:

##### 2-butoxyethyl acetate:

Biodegradability Concentration: 100 mg/l  
Biodegradation: 88 %  
Exposure time: 28 d

#### Bioaccumulative potential

No data available

#### Mobility in soil

No data available

#### Other adverse effects

No data available

### 13. Disposal considerations

#### Disposal methods

Waste from residue : Dispose of in accordance with local regulations.

### 14. Transport information

#### International Regulations

##### IATA-DGR

Not regulated as a dangerous good

##### IMDG-Code

Not regulated as a dangerous good

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Product name : MP-101  
Pollution category : Y  
Ship type : 3

#### Domestic regulation

##### 49 CFR

UN/ID/NA number : NA 1263 Paint related material  
Proper shipping name : Combustible liquid, n.o.s.



(2-butoxyethyl acetate)

Class : CBL  
Packing group : III  
Labels : None  
ERG Code : 128  
Marine pollutant : No  
Remarks : Combustible liquid, Packing group III for quantities of 450 liters (119 gallons) or more; not regulated for smaller quantities.

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

**15. Regulatory information**

**EPCRA - Emergency Planning and Community Right-to-Know**

**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)  
Acute toxicity (any route of exposure)  
Specific target organ toxicity (single or repeated exposure)

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

2-butoxyethyl acetate 112-07-2

**California Prop. 65**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**The ingredients of this product are reported in the following inventories:**

CH INV : On the inventory, or in compliance with the inventory  
DSL : All components of this product are on the Canadian DSL  
AICS : On the inventory, or in compliance with the inventory  
NZIoC : On the inventory, or in compliance with the inventory  
ENCS : On the inventory, or in compliance with the inventory

ISHL : On the inventory, or in compliance with the inventory  
 KECI : On the inventory, or in compliance with the inventory  
 PICCS : On the inventory, or in compliance with the inventory  
 IECSC : On the inventory, or in compliance with the inventory  
 TSCA : On TSCA Inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.  
 No substances are subject to TSCA 12(b) export notification requirements.

**16. Other information**

**Further information**

**Full text of other abbreviations**

ACGIH :	:	USA. ACGIH Threshold Limit Values (TLV)
:NIOSH REL :	:	USA. NIOSH Recommended Exposure Limits
ACGIH / TWA	:	8-hour, time-weighted average
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek

**Additional information**

The information and recommendations in this safety sheet with, to our best know and understand, precise to the date of his expedition. At all of the here included will have to be considered to create guarantee, expresses or implicit and will not establish contractual relation legally validates. It is responsibility of the user determine the applicability of this information and the suitability of the material or product for any purpose in particular.