

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/17/2013

Reviewed on 05/17/2013

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

- **Product identifier**
- **Trade name:** R-BR Rolmark Brown Ink
- **Article number:** 20985, 20917
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation** Printing inks
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Marsh Shipping Supply Co.,LLC  
926 McDonough Lake Road - Unit E  
Collinsville, IL 62234  
USA
- **Information department:**  
customerservice@mssc llc.com  
MSDS DEPT.
- **Emergency telephone number:**  
Infotrac: USA 1 800 535 5053  
International 352-323-3500 Call Collect

## 2 Hazards identification

- **Classification of the substance or mixture**



GHS02 Flame

H226 Flammable liquid and vapour.



GHS07

H319 Causes serious eye irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Read MSDS before using

**WARNING! FLAMMABLE LIQUID. HARMFUL.** Keep liquid and vapors away from ignition sources, heat, and static discharge. Avoid contact with eyes and skin. Avoid inhalation of mist or vapor.

**NOTICE-**For professional users only! This material is intended for use by trained professional applicators, only after carefully examining this MSDS and evaluating safety precautions associated with the use of this material.



Xi; Irritant

R36: Irritating to eyes.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of international guidelines.

- **Classification system:**

The classification was made according to the latest editions of international substances lists and from component data and msds information

- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

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- **Code letter and hazard designation of product:**

Xi Irritant

- **Risk phrases:**

36 Irritating to eyes.

- **Safety phrases:**

23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

25 Avoid contact with eyes.

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

36/39 Wear suitable protective clothing and eye/face protection.

51 Use only in well-ventilated areas.

60 This material and its container must be disposed of as hazardous waste.

- **Information pertaining to particular dangers for man and environment:**

- **Potential Chronic Health Effects**

Prolonged or repeated exposure of vapors, spray, or material may cause diseases of the lungs. Reports have associated repeated overexposure to solvents with brain and nervous system damage. Intentional misuse of this product may be harmful or fatal.

- **Target Organs**

Overexposure to this material or its components has been suggested as a cause of the following effects in laboratory animals and/or humans, and may aggravate preexisting disorders of these organs in humans: Anemia, Blood disorders, Brain damage, Cardiac function, eye, liver, lung, menstrual and fertility, skin, respiratory, Central Nervous System

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 2

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



HEALTH 1 Health = 1

FIRE 2 Fire = 2

REACTIVITY 0 Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Hazardous components**

123-42-2	4-hydroxy-4-methylpentan-2-one Xi R36 H226; H319	62.0%
	Polymer of modified Rosin Resin R18	7.0%

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14807-96-6	Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> )  Xi R36/37/38  H315; H319; H335	4.925%
1317-61-9	triiron tetraoxide	4.543%
112945-52-5	Amorphous Fumed Silica, Silicon Dioxide, Crystalline Free	1.0%
14808-60-7	Quartz (SiO <sub>2</sub> )  Xn R40-48  H351	0.124%

**Additional information:**

For the wording of the listed risk phrases refer to section 16.

This product contains one or more reported or suspect carcinogens which are noted IARC, NTP, OSHA, ACGIH, OR NIOSH respectively

This product contains pigments which may become a dust nuisance when removed by abrasive blasting or sanding. Airborne nuisance particulates have an ACGIH TLV for total dust of 10mg/M<sup>3</sup>

Prolonged inhalation of iron oxide dust is known to produce a condition known as siderosis. On X-rays it appears to be a benign pneumoconiosis and is not associated with pulmonary fibrosis or disability unless there is a concurrent exposure to other fibrosis-producing materials such as silica. The TLV is set to protect against siderosis.

## 4 First aid measures

· **Description of first aid measures**

· **General information:**

Take affected persons out into the fresh air.

Involve doctor immediately.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately rinse with water for 15 minutes. If irritation exists call physician.

· **After eye contact:**

Rinse opened eye for fifteen minutes under running water. If irritation persists, consult a doctor.

· **After swallowing:** Do not induce vomiting; immediately call for medical help.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed**

Breathing difficulty

Headache

Dizziness

Thirst

Cramp

Gastric or intestinal disorders

Coughing

Allergic reactions

Nausea

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **Special hazards arising from the substance or mixture**

Nitrogen oxides (NO<sub>x</sub>)

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- Carbon monoxide (CO)
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Wear protective clothing.
- **Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Prevent from spreading (e.g. by damming-in or oil barriers).
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Store in cool, dry place in tightly closed receptacles.  
Keep away from heat and direct sunlight.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.  
Handle with care. Avoid jolting, friction and impact.  
Hydrocarbon solvents are basically non-conductors of electricity and can become electrostatically charged during mixing or moving, observe grounding/grounding of containers and other equipment when handling.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store only in the original receptacle.  
Prevent any seepage into the ground.
- **Information about storage in one common storage facility:**  
Do not store together with oxidizing and acidic materials as well as heavy-metal compounds.  
Store away from foodstuffs.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from humidity and water.  
Protect from exposure to the light.

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· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

· **Control parameters**· **Components with limit values that require monitoring at the workplace:**

### 123-42-2 4-hydroxy-4-methylpentan-2-one

PEL 240 mg/m<sup>3</sup>, 50 ppmREL 240 mg/m<sup>3</sup>, 50 ppmTLV 238 mg/m<sup>3</sup>, 50 ppm

### Polymer of modified Rosin Resin

PEL 15\* 5\*\* mg/m<sup>3</sup>

\*Total Dust \*\*Respirable Fraction

### 1317-61-9 triiron tetraoxide

TLV Short-term value: 10 mg/m<sup>3</sup>

### 112945-52-5 Amorphous Fumed Silica, Silicon Dioxide, Crystalline Free

TLV 3.5 mg/m<sup>3</sup>

### 14808-60-7 Quartz (SiO<sub>2</sub>)

PEL see Quartz listing

REL 0.05\* mg/m<sup>3</sup>

\*respirable dust; See Pocket Guide App. A

TLV 0.025\* mg/m<sup>3</sup>

\*as respirable fraction

· **Additional information:** The lists that were valid during the creation were used as basis.· **Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Pregnant women should strictly avoid inhalation or skin contact.

Do not eat, drink, smoke or sniff while working.

· **Breathing equipment:**

Use suitable respiratory protective device in case of insufficient ventilation.

Use only with adequate ventilation.

Do not breath vapors, spray mists, or sanding dusts. Use air purifying respirators fitted with organic vapor/HEPA cartridges only if air monitoring demonstrates solvent/particulate levels do not exceed the respirator maximum use concentration. Use properly fitted NIOSH approved respirators. Local and general exhaust should minimize any exposure.

· **Protection of hands:**

Protective gloves

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- **Material of gloves**

Nitrile or natural rubber gloves are typically used to protect from minor contact. Butyl type are best for prolonged contact.

Nitrile rubber, NBR

- **Eye protection:**



Vapor proof safety goggles or full face respirator

- **Body protection:**

Solvent resistant protective clothing

Impervious protective clothing

Tyvek(R) coveralls to protect from light overspray protection or Saranex 23-P(R) for moderate exposure.

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Fluid

Color: Brown

- **Odor:** Alcohol-like

- **Odour threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 150 °C (302 °F)

- **Flash point:** 58 °C (136 °F)

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 620 °C (1148 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Not determined.

- **Explosion limits:**

Lower: 1.4 Vol %

Upper: 8.1 Vol %

- **Vapor pressure at 20 °C (68 °F):** 1.1 hPa (1 mm Hg)

- **Density at 20 °C (68 °F):** 1.18798 g/cm<sup>3</sup> (9.914 lbs/gal)

- **Relative density** Not determined.

- **Vapour density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix.

- **Partition coefficient (n-octanol/water):** Not determined.

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· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	62.0 %
<b>VOC content:</b>	62.0 %
	736.5 g/l / 6.15 lb/gl
<b>Solids content:</b>	38.0 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** Reacts with acids, alkalis and oxidizing agents.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**  
Nitrogen oxides  
Carbon monoxide and carbon dioxide

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

**123-42-2 4-hydroxy-4-methylpentan-2-one**

Oral	LD50	4000 mg/kg (rat)
Dermal	LD50	13630 mg/kg (rab)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:**  
Sensitizing effect through inhalation is possible with prolonged exposure.  
Sensitizing effect by skin contact is possible with prolonged exposure.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant  
Danger through skin absorption.
- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

1309-37-1	diiron trioxide	3	5.5%
14807-96-6	Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> )	3	4.925%
13463-67-7	titanium dioxide	2B	0.9%
7631-86-9	silicon dioxide, chemically prepared	3	0.489%

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14808-60-7 Quartz (SiO<sub>2</sub>)

I 0.124%

· **NTP (National Toxicology Program)**14808-60-7 Quartz (SiO<sub>2</sub>)

K 0.124%

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** This statement was deduced from the properties of the single components.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Hand over to hazardous waste disposers.  
This material and containers that are not empty, if discarded, would be regulated as a hazardous waste under RCRA. Treatment and disposal must be completed at a RCRA permitted treatment, storage, and disposal facility (TSD). The storage and transportation of RCRA hazardous wastes are also regulated by the USEPA.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1210
- **UN proper shipping name**
- **DOT, IMDG, IATA** PRINTING INK
- **ADR** 1210 PRINTING INK

· **Transport hazard class(es)**· **DOT**· **Class**

3 Flammable liquids.  
Ink, not regulated by Title 49 Part 173.150 Exceptions for Class 3 (flammable) and combustible liquids,(f)(1)

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· <b>Label</b>	3
· <b>ADR, IMDG, IATA</b>	
	
· <b>Class</b>	3 Flammable liquids
· <b>Label</b>	3
· <b>Packing group</b>	
· <b>DOT, ADR, IMDG, IATA</b>	III
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Warning: Flammable liquids
· <b>Danger code (Kemler):</b>	30
· <b>EMS Number:</b>	F-E,S-D
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	
	Not applicable.
· <b>UN "Model Regulation":</b>	UN1210, PRINTING INK, 3, III

## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

### · SARA Title III Section 311/312 - Hazard Communication Standard (40 CFR 370)

14807-96-6	Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> )	4.925%
13463-67-7	titanium dioxide	0.9%
1317-34-6	Manganite	0.429%

- **TSCA (Toxic Substances Control Act):**  
All ingredients are listed or exempt.

123-42-2	4-hydroxy-4-methylpentan-2-one
51274-00-1	Iron Oxide Yellow
1309-37-1	diiron trioxide
	acrylic copolymer -EU Polymer exempted- Not Regulated
14807-96-6	Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> )
1317-61-9	triiron tetraoxide
112945-52-5	Amorphous Fumed Silica, Silicon Dioxide, Crystalline Free
13463-67-7	titanium dioxide
7631-86-9	silicon dioxide, chemically prepared
1317-34-6	Manganite
14808-60-7	Quartz (SiO <sub>2</sub> )
21645-51-2	aluminium hydroxide

- **Proposition 65 /Chemicals known to cause cancer:**

This product may contain trace amounts of Arsenic, Cadmium, Mercury, Nickel, Lead.

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· **Proposition 65: Chemicals Known to Cause Reproductive Toxicity**

This product contains trace amounts of Arsenic (7440-38-2), Cadmium (7440-43-9), Mercury (7439-97-6), Nickel (7440-02-0), Lead (7439-92-1)

· **ACGIH Carcinogen**

14807-96-6	Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> )	A4	4.925%
13463-67-7	titanium dioxide	A4	0.9%
14808-60-7	Quartz (SiO <sub>2</sub> )	A2	0.124%

· **Carcinogenity categories**

· **TLV (Threshold Limit Value established by ACGIH)**

1309-37-1	diiron trioxide	A4	5.5%
14807-96-6	Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> )	A4	4.925%
13463-67-7	titanium dioxide	A4	0.9%
14808-60-7	Quartz (SiO <sub>2</sub> )	A2	0.124%

· **NIOSH (National Institute for Occupational Safety and Health)**

123-42-2	4-hydroxy-4-methylpentan-2-one	Guidelines 89-104	62.0%
1309-37-1	diiron trioxide	Guidelines 81-123	5.5%
14807-96-6	Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> )	Guidelines 81-123	4.925%
13463-67-7	titanium dioxide	*	0.9%
14808-60-7	Quartz (SiO <sub>2</sub> )	*	0.124%

· **State regulations**

· **Massachusetts Right-to-know / Hazardous Substance Codes**

123-42-2	4-hydroxy-4-methylpentan-2-one	2,4	62.0%
1309-37-1	diiron trioxide	2	5.5%
14807-96-6	Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> )	2,4 F5	4.925%
13463-67-7	titanium dioxide	4	0.9%
7631-86-9	silicon dioxide, chemically prepared	2,4,5 F5	0.489%
14808-60-7	Quartz (SiO <sub>2</sub> )	1,2,4 *E*C* F5	0.124%

· **Florida Hazardous / Toxic Substance Lists**

123-42-2	4-hydroxy-4-methylpentan-2-one	Toxic	62.0%
1309-37-1	diiron trioxide	Toxic	5.5%
7631-86-9	silicon dioxide, chemically prepared	Toxic	0.489%
14808-60-7	Quartz (SiO <sub>2</sub> )	Toxic	0.124%

· **Pennsylvania Hazardous Substances**

123-42-2	4-hydroxy-4-methylpentan-2-one	--	62.0%
14807-96-6	Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> )	Listed	4.925%
13463-67-7	titanium dioxide	Listed	0.9%
7631-86-9	silicon dioxide, chemically prepared	Listed	0.489%

· **Minnesota Right To Know / Hazardous Substances**

123-42-2	4-hydroxy-4-methylpentan-2-one	ANO	62.0%
1309-37-1	diiron trioxide	A	5.5%
14807-96-6	Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> )	Listed	4.925%
13463-67-7	titanium dioxide	A	0.9%
7631-86-9	silicon dioxide, chemically prepared	Codes ANOR, Carcinogen	0.489%

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14808-60-7 Quartz (SiO<sub>2</sub>)

Codes A

0.124%

**· Illinois Right To Know**

None of the ingredients is listed.

**· Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

**· Hazard symbols:**

Xi Irritant

**· Risk phrases:**

36 Irritating to eyes.

**· Safety phrases:**

23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

25 Avoid contact with eyes.

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

36/39 Wear suitable protective clothing and eye/face protection.

51 Use only in well-ventilated areas.

60 This material and its container must be disposed of as hazardous waste.

**· National regulations:**

**· Occupational Safety and Health Act (OSHA)**

Immediate (acute) health hazard

Delayed (chronic) Health Hazard

**· Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

**· Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 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.

**· Relevant phrases**

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

R18 In use, may form flammable/explosive vapour-air mixture.

R36 Irritating to eyes.

R36/37/38 Irritating to eyes, respiratory system and skin.

R40 Limited evidence of a carcinogenic effect.

R48 Danger of serious damage to health by prolonged exposure.

**· Contact:** Mike Rickert

**· Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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*ACGIH: American Conference of Governmental Industrial Hygienists**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent*

USA