

Conforms to ANSI Z400.1-2010 Standard - HCS 2012

| Protective Clothing | General Hazard | DOT |
|---------------------|----------------|-----|
| | | |

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

1.1 Product identifier

Product name : HEMPEL'S

CHEM-O-PON REDUCER

Product identity: 083JB00000, 21064

Product type: thinner

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

Field of application : buildings and metal industry.

Identified uses : Industrial/Professional use

TSCA: Unless otherwise stated. All components are listed or exempted.

1.3 Details of the supplier of the safety data sheet

Company details: HEMPEL (USA), Inc. HEMPEL (USA), Inc.

600 Conroe Park North Drive 2728 Empire Central Conroe, Texas 77303 Dallas, TX 75235

Toll free: (800) 678-6641, Phone number: 1-214-353-1600 E-mail: hempel@hempel.com Regular phone number: (936) 523-6000

E-mail Hempel@Hempel.com

1.4 Emergency telephone number (with hours of operation)

For Transportation Emergencies:

(24 hours)

CHEMTREC: 1-800-424-9300 (Toll-free in the U.S., Canada and the U.S. Virgin Islands) 703-527-3887

For calls originating elsewhere (Collect calls are accepted). Contract number: CCN10384

To preserve the effectiveness of arrangements for providing accurate and timely emergency response information, the basic identifying information (shipper name or contract number) must be included on chiming pages.

If the purchaser of this product is going to be shipping this product to other locations, the purchaser

must arrange for its own Emergency Information Provider to respond to transport incidents. Hempel's

24 hour response contract does not cover non-Hempel shipments.

For all other information : In USA toll free calling available: 1-800- 678-6641 or (936)-523-6000

(8 AM - 5 PM CST) See Section 4 of the safety data sheet (first aid measures).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.

1200).

GHS Classification : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4

ACUTE TOXICITY (inhalation) - Category 4

SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 CARCINOGENICITY - Category 2

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category

3

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs) - Category 2

2.2 Label elements

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SECTION 2: Hazards identification

Hazard pictograms:









Signal word : Danger

Hazard statements: H225 - Highly flammable liquid and vapor.

H302 + H332 - Harmful if swallowed or if inhaled.

H318 - Causes serious eye damage.

H315 - Causes skin irritation.

H351 - Suspected of causing cancer. H335 - May cause respiratory irritation. H336 - May cause drowsiness or dizziness.

H373 - May cause damage to organs through prolonged or repeated exposure. (hearing organs)

Precautionary statements:

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and

understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when

using this product. Wash hands thoroughly after handling.

Response: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED:

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or physician.

Storage: Store locked up. Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents and container in accordance with all local, regional, national and international

regulations.

Supplemental label elements: Avoid contact with skin and clothing. Wash thoroughly after handling.

2.3 Other hazards

Hazards not otherwise classified: Prolonged or repeated contact may dry skin and cause irritation.

SECTION 3: Composition/information on ingredients

Product definition : Mixture
Physical state : Liquid.

| Product/ingredient name | Identifiers | % | GHS Classification |
|-------------------------|-------------|-----------|--|
| xylene | 1330-20-7 | ≥25 - ≤42 | FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 |
| n-butanol | 71-36-3 | ≥10 - ≤23 | FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) |
| 4-methylpentan-2-one | 108-10-1 | ≥10 - ≤25 | (Narcotic effects) - Category 3 FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) |

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SECTION 3: Composition/information on ingredients

| ethylbenzene | 100-41-4 | ≥5 - ≤10 | (Respiratory tract irritation) - Category 3 FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 |
|-----------------|----------|-----------|---|
| 2-butoxyethanol | 111-76-2 | ≥3 - ≤5.3 | CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs) - Category 2 ASPIRATION HAZARD - Category 1 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General: In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth

to an unconscious person.

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate

treatment (first aid).

Eye contact: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 5

minutes, occasionally lifting the upper and lower eyelids. Seek immediate medical attention.

Inhalation: Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if

respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by

 $mouth. \ If \ unconscious, \ place \ in \ recovery \ position \ and \ get \ medical \ attention \ immediately.$

Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use

recognized skin cleanser. Do NOT use solvents or thinners.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Keep person warm

and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so

that vomit will not re-enter the mouth and throat.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that

fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation: Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or

dizziness. May cause respiratory irritation.

Skin contact: Causes skin irritation. Defatting to the skin.

Ingestion: Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation: Adverse symptoms may include the following:

respiratory tract irritation

coughing

nausea or vomiting

headache

drowsiness/fatigue dizziness/vertigo unconsciousness

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SECTION 4: First aid measures

Skin contact: Adverse symptoms may include the following:

pain or irritation

redness dryness cracking

blistering may occur

Ingestion: Adverse symptoms may include the following:

stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Not applicable.

Specific treatments: No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media: Recommended: alcohol resistant foam, CO₂, powders, water spray.

Not to be used: waterjet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or

Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent

explosion.

Hazardous combustion products: Decomposition products may include the following materials: carbon oxides

5.3 Advice for firefighters

mixture:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid all direct contact with the spilled material. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

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

6.4 Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used.

Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| Product/ingredient name | Exposure limit values |
|-------------------------|--|
| xylene | ACGIH TLV (United States, 3/2017). TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes. OSHA PEL (United States, 6/2016). TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. |
| n-butanol | ACGIH TLV (United States, 3/2017). TWA: 20 ppm 8 hours. NIOSH REL (United States, 10/2016). Absorbed through skin. CEIL: 50 ppm CEIL: 150 mg/m³ OSHA PEL (United States, 6/2016). TWA: 100 ppm 8 hours. TWA: 300 mg/m³ 8 hours. |
| 4-methylpentan-2-one | ACGIH TLV (United States, 3/2017). TWA: 20 ppm 8 hours. STEL: 75 ppm 15 minutes. NIOSH REL (United States, 10/2016). TWA: 50 ppm 10 hours. TWA: 205 mg/m³ 10 hours. STEL: 75 ppm 15 minutes. STEL: 75 ppm 15 minutes. OSHA PEL (United States, 6/2016). TWA: 100 ppm 8 hours. TWA: 410 mg/m³ 8 hours. |
| ethylbenzene | ACGIH TLV (United States, 3/2017). TWA: 20 ppm 8 hours. NIOSH REL (United States, 10/2016). STEL: 545 mg/m³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 435 mg/m³ 10 hours. TWA: 100 ppm 10 hours. OSHA PEL (United States, 6/2016). TWA: 435 mg/m³ 8 hours. TWA: 100 ppm 8 hours. |
| 2-butoxyethanol | ACGIH TLV (United States, 3/2017). TWA: 20 ppm 8 hours. NIOSH REL (United States, 10/2016). Absorbed through skin. |

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SECTION 8: Exposure controls/personal protection

TWA: 5 ppm 10 hours. TWA: 24 mg/m³ 10 hours.

OSHA PEL (United States, 6/2016). Absorbed through skin.

TWA: 50 ppm 8 hours. TWA: 240 mg/m³ 8 hours.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

8.2 Exposure controls

Appropriate engineering controls

Provide local exhaust and general ventilation systems to maintain airborne concentrations below OSHA, ACGIH, and manufacturer recommended exposure limits. Local exhaust ventilation is preferred because it prevents contaminant dispersion into work areas by controlling it at its source. Use local and general exhaust ventilation to effectively remove and prevent buildup of mists/vapors/fumes generated from the handling of this product.

Note: Local exhaust ventilation is designed to capture an emitted contaminant at or near its source, before the contaminant has a chance to disperse into the workplace air. General exhaust ventilation, also called dilution ventilation, is different from local exhaust ventilation because instead of capturing emissions at their source and removing them from the air, general exhaust ventilation allows the contaminant to be emitted into the workplace air and then dilutes the concentration of the contaminant to an acceptable level (e.g., to the PEL or below).

Individual protection measures

General: Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be

worn when soiling is so great that regular work clothes do not adequately protect skin against contact

with the product. Safety eyewear should be used when there is a likelihood of exposure.

Hygiene measures : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking,

using lavatory, and at the end of day.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment

indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face

respirator may be required instead.

Hand protection: Wear chemical-resistant gloves in combination with 'basic' employee training. The quality of the

chemical-resistant protective gloves must be chosen as a function of the specific workplace

concentrations and quantity of hazardous substances.

Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the

appropriate type. Below listed glove(s) should be regarded as generic advice:

May be used: nitrile rubber, neoprene rubber, butyl rubber

Recommended: Silver Shield / Barrier / 4H gloves, polyvinyl alcohol (PVA), Viton®

Short term exposure: natural rubber (latex), polyvinyl chloride (PVC)

Body protection : Personal protective equipment for the body should be selected based on the task being performed and

the risks involved handling this product.

Respiratory protection : If working areas have insufficient ventilation, wear half or totally covering mask equipped with gas filter

of type Organic Vapor, when grinding use particle filter of type P95, P99 or P100. When spraying use a combined filter (organic vapor / HEPA or organic vapor / P100 type). Be sure to use approved/certified respirator or equivalent. Always wear an air-fed respirator when spraying in a continuous and

prolonged work situation (e.g. hood with supply of fresh or compressed air or a full face, powered air purifying filter).

purifying inter

Note: Application of paint products by spraying requires additional safety precautions: Full body suit, Full face respirator with air supplied.

Environmental exposure controls

Protective clothing (pictograms):

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state: Liquid.

Color: Clear

Odor: Solvent-like

pH: Testing not relevant or not possible due to nature of the product.

Melting point/freezing point: -94.96°C This is based on data for the following ingredient: xylene
Boiling point/boiling range: Testing not relevant or not possible due to nature of the product.

Flash point: Closed cup: 22°C (71.6°F)

Evaporation rate: Testing not relevant or not possible due to nature of the product.

Flammability: Highly flammable in the presence of the following materials or conditions: open flames, sparks and

static discharge and heat.

Flammable in the presence of the following materials or conditions: oxidizing materials.

Slightly flammable in the presence of the following materials or conditions: reducing materials.

Upper/lower flammability or

explosive limits:

0.8 - 12.7 vol %

Vapor pressure : 0.89 kPa This is based on data for the following ingredient: xylene Vapor density : Testing not relevant or not possible due to nature of the product.

Relative density: 0.841 g/cm³

Solubility(ies):

Easily soluble in the following materials: cold water and hot water.

Partition coefficient (LogKow):

Testing not relevant or not possible due to nature of the product.

Testing not relevant or not possible due to nature of the product.

Testing not relevant or not possible due to nature of the product.

Testing not relevant or not possible due to nature of the product.

Testing not relevant or not possible due to nature of the product.

Explosive properties: Explosive in the presence of the following materials or conditions: open flames, sparks and static

discharge and heat.

Oxidizing properties: Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight 100 % (w/w)

(Included excempt solvent(s)):

Water % by weight: Weighted average: 0 %

VOC content (Coatings): 7.02 lbs/gal (840.8 g/l)

VOC content (Regulatory): 7.02 lbs/gal (841 g/l)

TOC Content (Volatile): Weighted average: 665 g/l

Solvent Gas: Weighted average: 0.21 m³/l

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

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SECTION 10: Stability and reactivity

10.5 Incompatible materials

Highly reactive or incompatible with the following materials: oxidizing materials and reducing materials.

10.6 Hazardous decomposition products

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

Decomposition products may include the following materials: carbon oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Exposure to component solvent vapor concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

Direct contact with the eyes can cause irreversible damage, including blindness.

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|---------------------------------|---------|------------------|----------|
| xylene | LC50 Inhalation Gas. | Rat | 5000 ppm | 4 hours |
| | LC50 Inhalation Vapor | Rat | 6350 ppm | 4 hours |
| | LD50 Dermal | Rabbit | >4200 mg/kg | - |
| | LD50 Oral | Rat | 3523 mg/kg | - |
| n-butanol | LC50 Inhalation Vapor | Rat | 24000 mg/m³ | 4 hours |
| | LD50 Dermal | Rabbit | 3400 mg/kg | _ |
| | LD50 Oral | Rat | 790 mg/kg | _ |
| 4-methylpentan-2-one | LD Dermal | Rabbit | >3 g/kg | _ |
| ethylbenzene | LD50 Dermal | Rabbit | >5000 mg/kg | _ |
| | LD50 Oral | Rat | 3500 mg/kg | _ |
| 2-butoxyethanol | LC50 Inhalation Dusts and mists | Rat | 2.2 mg/l | 4 hours |
| | LD50 Dermal | Rat | >2000 mg/kg | _ |
| | LD50 Oral | Rat | 300 - 2000 mg/kg | - |

Acute toxicity estimates

| Route | ATE value |
|------------------------------|--------------|
| Oral | 1863.7 mg/kg |
| Dermal | 2035.3 mg/kg |
| Inhalation (gases) | 9703.6 ppm |
| Inhalation (vapors) | 14.24 mg/l |
| Inhalation (dusts and mists) | 41.74 mg/l |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure |
|-------------------------|-----------------------------|---------|-------|--------------------------|
| xylene | Eyes - Severe irritant | Rabbit | - | 24 hours 5 milligrams |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 milligrams |
| n-butanol | Eyes - Severe irritant | Rabbit | - | 24 hours 2 milligrams |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 20 milligrams |
| 4-methylpentan-2-one | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 microliters |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 milligrams |
| ethylbenzene | Skin - Mild irritant | Rabbit | - | 24 hours 15 milligrams |
| | Respiratory - Mild irritant | Rabbit | - | - |
| | Eyes - Mild irritant | Rabbit | - | - |
| 2-butoxyethanol | Eyes - Moderate irritant | Rabbit | - | - |
| | Skin - Mild irritant | Rabbit | - | - |

Carcinogen Classification

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SECTION 11: Toxicological information

| Product/ingredient name | IARC | NTP | OSHA |
|-------------------------|------|-----|------|
| xylene | 3 | - | - |
| 4-methylpentan-2-one | 2B | - | - |
| ethylbenzene | 2B | - | - |
| 2-butoxyethanol | 3 | - | - |

Specific target organ toxicity (single exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|---|
| n-butanol | Category 3 | | Respiratory tract irritation and Narcotic effects |
| 4-methylpentan-2-one | Category 3 | Not applicable. | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|----------------|
| ethylbenzene | Category 2 | Not determined | hearing organs |

Aspiration hazard

| Product/ingredient name | Result |
|-------------------------|--------------------------------|
| ethylbenzene | ASPIRATION HAZARD - Category 1 |

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

Other information : No additional known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Do not allow to enter drains or watercourses.

When spilled, this product may act as an oil, causing a film, sheen, emulsion, or sludge at or beneath the surface of a body of water. Oils of any kind can cause: (a) drowning of waterfowl due to lack of buoyancy, loss of insulating capacity of feathers, starvation and vulnerability to predators due to lack of mobility; (b) lethal effect on fish by coating gill surfaces, preventing respiration; (c) potential fish kills resulting from alteration in biochemical oxygen demand; (d) asphyxiation of benthic life forms when floating masses become engaged with surface debris and settle on the bottom; and (e) adverse aesthetic effects of fouled shoreline and beaches.

| Product/ingredient name | Result | Species | Exposure |
|-------------------------|--|---|----------|
| n-butanol | Acute EC50 1328 mg/l | Daphnia | 96 hours |
| | Acute LC50 1.376 mg/l | Fish | 96 hours |
| 4-methylpentan-2-one | Chronic NOEC 7800 - 39000 µg/l Fresh water | Daphnia - Daphnia magna | 21 days |
| | Chronic NOEC 168 mg/l Fresh water | Fish - Pimephales promelas - Embryo | 33 days |
| ethylbenzene | Chronic NOEC <1000 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 96 hours |
| 2-butoxyethanol | Acute EC50 911 mg/l | Algae | 72 hours |
| | Acute EC50 1550 mg/l | Daphnia | 48 hours |
| | Acute LC50 1474 mg/l | Fish | 96 hours |

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|-------------------------|--------------------|---------------------------|-------------------|----------|
| xylene | - | >60 % - Readily - 28 days | - | - |
| n-butanol | OECD 301D Ready | 92 % - 20 days | - | - |
| | Biodegradability - | - | | |
| | Closed Bottle Test | | | |
| ethylbenzene | - | >70 % - Readily - 28 days | - | - |
| 2-butoxyethanol | - | 90 % - Readily - 28 days | - | - |
| | - | 32 % - 5 days | 756 mg/kg BOD₅ | - |
| | - | 32 % - 28 days | 2379000 mg/kg COD | - |

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SECTION 12: Ecological information

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| xylene | - | - | Readily |
| n-butanol | - | - | Readily |
| ethylbenzene | - | - | Readily |
| 2-butoxyethanol | - | - | Readily |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|-------------------------|--------------------|------------|-----------|
| xylene | 3.12 | 8.1 - 25.9 | low |
| n-butanol | 1 | 3.16 | low |
| 4-methylpentan-2-one | 1.9 | - | low |
| ethylbenzene | 3.6 | - | low |
| 2-butoxyethanol | 0.81 | - | low |

12.4 Mobility in soil

Soil/water partition coefficient

No known data avaliable in our database.

(K_{oc}):

Mobility: No known data avaliable in our database.

12.5 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7 and Section 8 for additional handling information and protection of employees.

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

United States - RCRA Toxic hazardous waste "U" List

| Ingredient | CAS# | Status | Reference number |
|--|-----------|--------|---------------------|
| Xylene | 1330-20-7 | Listed | U239 |
| 1-Butanol (I); n-Butyl alcohol (I) | 71-36-3 | Listed | U031 |
| Methyl isobutyl ketone (I); 4-Methyl-2-pentanone (I) | 108-10-1 | Listed | U161 |

SECTION 14: Transport information

Transport may take place according to national regulation or DOT for transport by road and by train, IMDG for transport by sea, IATA for Air shipment. Refer to specific Dangerous Goods Transport requirements under 49CFR, ICAO and IATA.

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SECTION 14: Transport information

| | 14.1 UN no. | 14.2 Proper shipping name | 14.3 Transport hazard class(es) | 14.4 PG* | 14.5 Env* | Additional information |
|--------------|----------------|------------------------------|------------------------------------|-------------|--------------|--|
| DOT Code | UN1263 | PAINT RELATED MATERIAL | 3 | 11 | No. | Reportable quantity (xylene, ethylbenzene) 241.41 lbs / 109.6 kg [34.427 gal / 130. 32 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements. |
| TDG Code | UN1263 | PAINT RELATED MATERIAL | 3 - | II | No. | Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 18-2.19 (Class 3). |
| SCT Code | UN1263 | PAINT RELATED MATERIAL | 3 - | II | No. | - |
| IMDG Code | UN1263 | PAINT RELATED MATERIAL | 3 - | II | No. | Emergency schedules F-E, S-E |
| IATA Code | UN1263 | PAINT RELATED MATERIAL | 3 - | II | No. | - |

Code : Classification PG* : Packing group

Env.*: Environmental hazards

14.6 Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

SECTION 15: Regulatory information

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

U.S. Federal regulations : All components are listed or exempted.

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 307: ethylbenzene

Clean Water Act (CWA) 311: xylene; ethylbenzene

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

| Product/ingredient name | CAS number | Concentration |
|-------------------------|------------|---------------|
| xylene | 1330-20-7 | 41.424 |
| ethylbenzene | 100-41-4 | 9.0931 |
| 4-methylpentan-2-one | 108-10-1 | 21.471 |

Clean Air Act Section 602 Class I Substances : Not listed
Clean Air Act Section 602 Class II Substances : Not listed
DEA List I Chemicals (Precursor Chemicals) : Not listed
DEA List II Chemicals (Essential Chemicals) : Listed

SARA 302/304 - SARA 311/312: SARA 302/304: No products were found.

SARA 311/312 Hazards identification: Fire hazard, Immediate (acute) health hazard, Delayed

(chronic) health hazard

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SECTION 15: Regulatory information

| Product/ingredient name | % | Fire hazard | Sudden release of pressure | Reactive | Immediate (acute) health hazard | Delayed (chronic) health hazard |
|-------------------------|---------|-------------|----------------------------------|----------|---------------------------------------|---------------------------------------|
| xylene | 25 - 50 | Yes. | No. | No. | Yes. | No. |
| n-butanol | 10 - 25 | Yes. | No. | No. | Yes. | No. |
| 4-methylpentan-2-one | 10 - 25 | Yes. | No. | No. | Yes. | Yes. |
| ethylbenzene | 5 - 10 | Yes. | No. | No. | Yes. | Yes. |
| 2-butoxyethanol | 5 - 10 | No. | No. | No. | Yes. | No. |

SARA 313:

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

Form R - Reporting requirements :

| Product/ingredient name | CAS number | Concentration |
|--|--|---|
| xylene n-butanol 4-methylpentan-2-one ethylbenzene 2-butoxyethanol | 1330-20-7 71-36-3 108-10-1 100-41-4 111-76-2 | 20 - 50 20 - 50 20 - 50 5 - 10 5 - 10 |

Supplier notification:

| Product/ingredient name | CAS number | Concentration |
|--|--|---|
| xylene n-butanol 4-methylpentan-2-one ethylbenzene 2-butoxyethanol | 1330-20-7 71-36-3 108-10-1 100-41-4 111-76-2 | 20 - 50 20 - 50 20 - 50 5 - 10 5 - 10 |

State regulations:

Connecticut Carcinogen Reporting: None of the components are listed.

Connecticut Hazardous Material Survey: None of the components are listed.

Florida substances: None of the components are listed.

Illinois Chemical Safety Act: None of the components are listed.

Illinois Toxic Substances Disclosure to Employee Act: None of the components are listed.

Louisiana Reporting: None of the components are listed. Louisiana Spill: None of the components are listed. Massachusetts Spill: None of the components are listed.

Massachusetts Substances: The following components are listed: XYLENE; DIMETHYLBENZENE; ETHYL BENZENE; ETHYLBENZENE; N-BUTYL ALCOHOL; 1-BUTANOL; METHYL ISOBUTYL

KETONE; 4-METHYL-2-PENTANONE; 2-BUTOXYETHANOL; BUTYL CELLOSOLVE

Michigan Critical Material: None of the components are listed.

Minnesota Hazardous Substances: None of the components are listed.

New Jersey Hazardous Substances: The following components are listed: XYLENES; BENZENE, DIMETHYL-; ETHYL BENZENE; BENZENE, ETHYL-; n-BUTYL ALCOHOL; 1-BUTANOL; METHYL ISOBUTYL KETONE; 2-PENTANONE, 4-METHYL-; 2-BUTOXY ETHANOL; BUTYL CELLOSOLVE

New Jersey Spill: None of the components are listed.

New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.

New York Acutely Hazardous Substances: The following components are listed: Xylene mixed;

Ethylbenzene; Butyl alcohol; 1-Butanol; Methyl isobutyl ketone; Hexone

New York Toxic Chemical Release Reporting: None of the components are listed.

Pennsylvania RTK Hazardous Substances: The following components are listed: BENZENE, DIMETHYL-; BENZENE, ETHYL-; 1-BUTANOL; 2-PENTANONE, 4-METHYL-; ETHANOL, 2-BUTOXY-

Rhode Island Hazardous Substances: None of the components are listed.

California Prop. 65 PFF:

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

| Product/ingredient name | Cancer | Reproductive | No significant risk level | Maximum acceptable dosage level |
|--------------------------------------|--------------|--------------|---------------------------|---------------------------------|
| ethylbenzene 4-methylpentan-2-one | Yes. Yes. | No. Yes. | Yes. | |

SECTION 16: Other information

Remarks: Note: In USA, consult Code of Federal Regulations, Title 29, Labor, Parts 1910 and 1915 concerning

occupational safety and health standards and regulations, as well as any other applicable Federal,

State or local regulations that apply to safe practices in coating operations.

Warning! If you scrape, sand, or remove old paint, you may release lead dust. LEAD is TOXIC.

Validation: Validated by US - HSE Products Coordinator on 30 January 2018

GHS Classification

Procedure used to derive the classification.

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SECTION 16: Other information

| Classification | Justification |
|--|-----------------------|
| FLAMMABLE LIQUIDS - Category 2 | On basis of test data |
| ACUTE TOXICITY (oral) - Category 4 | Calculation method |
| ACUTE TOXICITY (inhalation) - Category 4 | Calculation method |
| SKIN IRRITATION - Category 2 | Calculation method |
| SERIOUS EYE DAMAGE - Category 1 | Calculation method |
| CARCINOGENICITY - Category 2 | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs) - Category 2 | Calculation method |

Hazardous Material Information System (U.S.A.)



National Fire Protection Association (U.S.A.)



Personal Protective Equipment (PPE) shown in this section is a suggestion. Since conditions vary from one work location to another consult the facility safety & health program. Customer or end user is responsible to evaluate worker exposure conditions at the site of application and determine the appropriate PPE suitable for workers at that particular facility or location.

Abbreviations and acronyms:

ANSI = American National Standards Institute HCS = Hazardous Communication System TSCA = Toxic Substances Control Act CFR = Code of federal Regulations GHS = Globally Harmonized System of Classification and Labelling of Chemicals OSHA = United States Occupational Health and Safety Administration NIOSH = National Institute for Occupational Safety and Health ACGIH = American Conference of Industrial Hygienists IARC = International Agency for Research on Cancer. NTP = National Toxicology Program ATE = Acute Toxicity Estimate

OECD = Organisation for Economic Co-operation and Development

BCF = Bioconcentration Factor DOT = United States Department of Transportation

ERG = Emergency Response Guide

TDG = Transport of Dangerous Goods, Canada

SCT = Transportation & Communications Ministry, Mexico

IMDG = International Maritime Dangerous Goods IATA = International Air Transport Association

SARA = Superfund Amendments Reauthorization Act

EPCRA = Emergency Planning and Community Right to Know Act

Notice to reader



Indicates information that has changed from previously issued version.

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.

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