

Material Safety Data Sheet



2K Rapid Grundierfüller

1. Product and company identification

3680031

Product name	: 2K Rapid Grundierfüller
Material uses	: Coatings: Paint.
Code	: REZ56
Supplier	: Peter Kwasny GmbH Heilbronner Str. 96 D-74831 Gundelsheim Tel.: +49-(0)6269-95-20 E-mail: labor@kwasny.de
Validation date	: 23/08/2012.
In case of emergency	: +49(0)6269-95-20

2. Hazards identification

Physical state	: Liquid. [Aerosol.]
Odor	: Characteristic.
Emergency overview	
Signal word	: DANGER!
Hazard statements	: FLAMMABLE AEROSOL. INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS AND NAUSEA AND MAY LEAD TO UNCONSCIOUSNESS. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. POSSIBLE CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER, BASED ON ANIMAL DATA. POSSIBLE DEVELOPMENTAL HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE ADVERSE DEVELOPMENTAL EFFECTS, BASED ON ANIMAL DATA.
Precautions	: Do not puncture, incinerate or store the container at temperatures above 120°F (49°C) or in direct sunlight. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Avoid exposure during pregnancy. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Routes of entry	: Dermal contact. Eye contact. Inhalation.
Potential acute health effects	
Inhalation	: Can cause central nervous system (CNS) depression. Irritating to respiratory system.
Ingestion	: Harmful if swallowed. Can cause central nervous system (CNS) depression.
Skin	: Harmful in contact with skin. Irritating to skin. Defatting to the skin.
Eyes	: Severely irritating to eyes. Risk of serious damage to eyes.
Potential chronic health effects	
Chronic effects	: Contains material that can cause target organ damage. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Carcinogenicity	: Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.

2. Hazards identification

Developmental effects : Contains material which may cause developmental abnormalities, based on animal data.

Fertility effects : No known significant effects or critical hazards.

Target organs : Contains material which causes damage to the following organs: central nervous system (CNS).
Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, liver, mucous membranes, peripheral nervous system, gastrointestinal tract, upper respiratory tract, skin, ears, eye, lens or cornea, nose/sinuses, throat.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
respiratory tract irritation
coughing
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths

Skin : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
reduced fetal weight
increase in fetal deaths

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness
reduced fetal weight
increase in fetal deaths

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

Name	CAS number	%
dimethyl ether	115-10-6	30-60
acetone	67-64-1	10-30
n-butyl acetate	123-86-4	5-10
4-methylpentan-2-one	108-10-1	1-5
xylene	1330-20-7	1-5
butan-1-ol	71-36-3	1-5
heptan-2-one	110-43-0	1-5
1-methoxy-2-propanol	107-98-2	1-5
ethylbenzene	100-41-4	0.1-1

3. Composition/information on ingredients

There are no additional 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.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- 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.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product : Flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

Extinguishing media

- Suitable** : SMALL FIRE
In case of fire, use water spray. Powder. Carbon dioxide (CO₂).
LARGE FIRE
Use alcohol-resistant foam or water spray or fog. Cool closed containers exposed to fire with water.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Special remarks on explosion hazards** : In use, may form flammable/explosive vapor-air mixture.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

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).

Methods for cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill : 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Empty containers retain product residue and can be hazardous.

Storage : Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Ingredient	Exposure limits
dimethyl ether acetone n-butyl acetate	<p>AIHA WEEL (United States, 10/2011). TWA: 1000 ppm 8 hours.</p> <p>ACGIH TLV (United States, 1/2011). TWA: 500 ppm 8 hours. TWA: 1188 mg/m³ 8 hours. STEL: 750 ppm 15 minutes. STEL: 1782 mg/m³ 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 750 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. STEL: 1000 ppm 15 minutes. STEL: 2400 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 6/2009). TWA: 250 ppm 10 hours. TWA: 590 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 6/2010). TWA: 1000 ppm 8 hours. TWA: 2400 mg/m³ 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 150 ppm 8 hours. TWA: 710 mg/m³ 8 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 6/2009). TWA: 150 ppm 10 hours. TWA: 710 mg/m³ 10 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m³ 15 minutes.</p> <p>ACGIH TLV (United States, 1/2011). TWA: 150 ppm 8 hours. STEL: 200 ppm 15 minutes.</p> <p>OSHA PEL (United States, 6/2010). TWA: 150 ppm 8 hours. TWA: 710 mg/m³ 8 hours.</p>
4-methylpentan-2-one	<p>ACGIH TLV (United States, 1/2011). TWA: 20 ppm 8 hours. STEL: 75 ppm 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 50 ppm 8 hours. TWA: 205 mg/m³ 8 hours. STEL: 75 ppm 15 minutes. STEL: 300 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 6/2009). TWA: 50 ppm 10 hours. TWA: 205 mg/m³ 10 hours. STEL: 75 ppm 15 minutes. STEL: 300 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 6/2010). TWA: 100 ppm 8 hours. TWA: 410 mg/m³ 8 hours.</p>

8. Exposure controls/personal protection

xylene	<p>ACGIH TLV (United States, 1/2011). TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 6/2010). TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.</p>
butan-1-ol	<p>ACGIH TLV (United States, 1/2011). TWA: 20 ppm 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. CEIL: 50 ppm CEIL: 150 mg/m³</p> <p>NIOSH REL (United States, 6/2009). Absorbed through skin. CEIL: 50 ppm CEIL: 150 mg/m³</p> <p>OSHA PEL (United States, 6/2010). TWA: 100 ppm 8 hours. TWA: 300 mg/m³ 8 hours.</p>
heptan-2-one	<p>ACGIH TLV (United States, 1/2011). TWA: 50 ppm 8 hours. TWA: 233 mg/m³ 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 100 ppm 8 hours. TWA: 465 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 6/2009). TWA: 100 ppm 10 hours. TWA: 465 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 6/2010). TWA: 100 ppm 8 hours. TWA: 465 mg/m³ 8 hours.</p>
1-methoxy-2-propanol	<p>ACGIH TLV (United States, 1/2011). TWA: 100 ppm 8 hours. TWA: 369 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 553 mg/m³ 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 100 ppm 8 hours. TWA: 360 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 540 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 6/2009). TWA: 100 ppm 10 hours. TWA: 360 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 540 mg/m³ 15 minutes.</p>
ethylbenzene	<p>ACGIH TLV (United States, 1/2011). TWA: 20 ppm 8 hours.</p>

8. Exposure controls/personal protection

OSHA PEL 1989 (United States, 3/1989).

TWA: 100 ppm 8 hours.
 TWA: 435 mg/m³ 8 hours.
 STEL: 125 ppm 15 minutes.
 STEL: 545 mg/m³ 15 minutes.

NIOSH REL (United States, 6/2009).

TWA: 100 ppm 10 hours.
 TWA: 435 mg/m³ 10 hours.
 STEL: 125 ppm 15 minutes.
 STEL: 545 mg/m³ 15 minutes.

OSHA PEL (United States, 6/2010).

TWA: 100 ppm 8 hours.
 TWA: 435 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.
- Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: half-face mask (as filter combination A-P2). Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): Nitrile rubber.
 < 1 hour (breakthrough time): Butyl rubber gloves.
- Eyes** : 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 or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: Tightly-fitting goggles

8. Exposure controls/personal protection

- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Environmental exposure controls** : 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.

9. Physical and chemical properties

- Physical state** : Liquid. [Aerosol.]
- Flash point** : Closed cup: <0°C (<32°F) [Without propellant gas.]
- Auto-ignition temperature** : 235°C (455°F)
- Flammable limits** : Lower: 1.2%
Upper: 18.6%
- Odor** : Characteristic.
- Vapor pressure** : 340 kPa (2550.2 mm Hg) [room temperature]
- Vapor density** : >1 [Air = 1]
- Solubility** : Insoluble in the following materials: cold water and hot water.

10. Stability and reactivity

- Chemical stability** : The product is stable.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).
- Incompatible materials** : Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

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

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
dimethyl ether	LC50 Inhalation Gas.	Rat	164000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	309 g/m ³	4 hours
acetone	LD50 Oral	Rat	5800 mg/kg	-
n-butyl acetate	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-
4-methylpentan-2-one	LC50 Inhalation Vapor	Rat	8.2 to 16.4 mg/l	4 hours
	LD50 Oral	Rat	2080 mg/kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Dermal	Rabbit	>1700 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
butan-1-ol	LC50 Inhalation Vapor	Rat	24000 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-

11. Toxicological information

heptan-2-one	LD50 Oral	Rat	790 mg/kg	-
	LC50 Inhalation Vapor	Rat	2000 ppm	4 hours
1-methoxy-2-propanol	LD50 Oral	Rat	1600 mg/kg	-
	LD50 Dermal	Rabbit	13 g/kg	-
ethylbenzene	LD50 Oral	Rat	6600 mg/kg	-
	LC50 Inhalation Vapor	Rat	17.2 mg/l	4 hours
	LD50 Dermal	Rabbit	15354 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Not available.

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
acetone	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
n-butyl acetate	Skin - Mild irritant	Rabbit	-	395 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
4-methylpentan-2-one	Eyes - Moderate irritant	Rabbit	-	24 hours 100 microliters	-
	Eyes - Severe irritant	Rabbit	-	40 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
butan-1-ol	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 Percent	-
	Skin - Moderate irritant	Rabbit	-	24 hours 2 milligrams	-
heptan-2-one	Eyes - Severe irritant	Rabbit	-	0.005 Milliliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 14 milligrams	-
1-methoxy-2-propanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-

11. Toxicological information

milligrams

Sensitizer

Not available.

Conclusion/Summary : Not available.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
acetone	A4	-	-	-	-	-
4-methylpentan-2-one	A3	2B	-	-	-	-
xylene	A4	3	-	-	-	-
ethylbenzene	A3	2B	-	-	-	-

Mutagenicity

Product/ingredient name	Test	Experiment	Result
acetone	471 Bacterial Reverse Mutation Test	Subject: Bacteria	Negative

Teratogenicity

Not available.

Reproductive toxicity

Not available.

12. Ecological information

Ecotoxicity : This material is toxic to aquatic life with long lasting effects.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
acetone	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
n-butyl acetate	Acute LC50 32000 µg/l Marine water	Crustaceans - Artemia salina - Nauplii	48 hours
4-methylpentan-2-one	Acute LC50 18000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 505000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 168 mg/l Fresh water	Fish - Pimephales promelas - Embryo	33 days
xylene	Acute IC50 2.2 mg/l	Algae	72 hours
	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
butan-1-ol	Acute LC50 3300 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 1983000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
heptan-2-one	Acute LC50 100 mg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 131000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
ethylbenzene	Acute EC50 4.6 mg/l	Algae - chneriella subcapitata	72 hours

12. Ecological information

Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
Acute EC50 2.1 mg/l	Daphnia - Daphnia Magna	48 hours
Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence/degradability

Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : 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. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1950	Aerosols RQ (Benzene, dimethyl-, acetone)	2.1	-		<p>Reportable quantity 3822.4 lbs / 1735.4 kg Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</p> <p>Packaging instruction Passenger aircraft Quantity limitation: 75 kg</p> <p>Cargo aircraft Quantity limitation: 150 kg</p> <p>Special provisions 153, N82</p>
IMDG Class	UN1950	AEROSOLS	2.1	-		<p>Emergency schedules (EmS) F-D, S-U</p>

14. Transport information

IATA-DGR Class	UN1950	Aerosols, flammable	2.1	-		Passenger and Cargo Aircraft Quantity limitation: 75 kg Packaging instructions: 203 Cargo Aircraft Only Quantity limitation: 150 kg Packaging instructions: 203 Limited Quantities - Passenger Aircraft Quantity limitation: 30 kg Packaging instructions: Y203
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PG* : Packing group

15. Regulatory information

HCS Classification : Flammable aerosol
Irritating material
Carcinogen
Target organ effects

U.S. Federal regulations : **TSCA 4(a) final test rules:** 4-methylpentan-2-one
TSCA 8(a) IUR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: n-butyl acetate; heptan-2-one; butan-1-ol; xylene; 1-methoxy-2-propanol; acetone; 4-methylpentan-2-one; dimethyl ether
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: n-butyl acetate: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; heptan-2-one: Fire hazard, Immediate (acute) health hazard; butan-1-ol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; xylene: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; 1-methoxy-2-propanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; acetone: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; 4-methylpentan-2-one: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; dimethyl ether: Fire hazard, Sudden release of pressure
Clean Water Act (CWA) 307: zinc oxide; ethylbenzene
Clean Water Act (CWA) 311: n-butyl acetate; xylene; methyl methacrylate; ethylbenzene
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: dimethyl ether

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

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

15. Regulatory information

DEA List II Chemicals (Essential Chemicals) : Listed

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	4-methylpentan-2-one	108-10-1	1-5
	xylene	1330-20-7	1-5
	butan-1-ol	71-36-3	1-5
	ethylbenzene	100-41-4	0.1-1
Supplier notification	4-methylpentan-2-one	108-10-1	1-5
	xylene	1330-20-7	1-5
	butan-1-ol	71-36-3	1-5
	ethylbenzene	100-41-4	0.1-1

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.

State regulations

Massachusetts

: The following components are listed: BUTYL ACETATE; XYLENE; N-BUTYL ALCOHOL; METHYL (N-AMYL) KETONE; PROPYLENE GLYCOL METHYL ETHER; METHYL ETHER; ACETONE; METHYL ISOBUTYL KETONE

New York

: The following components are listed: Butyl acetate; Xylene (mixed); 1-Butanol; Acetone; Hexone; Ethylbenzene

New Jersey

: The following components are listed: n-BUTYL ACETATE; ACETIC ACID, BUTYL ESTER; XYLENES; BENZENE, DIMETHYL-; n-BUTYL ALCOHOL; 1-BUTANOL; METHYL n-AMYL KETONE; 2-HEPTANONE; PROPYLENE GLYCOL MONOMETHYL ETHER; 1-METHOXY-2-PROPANOL; DIMETHYL ETHER; METHANE, OXYBIS-; ACETONE; 2-PROPANONE; METHYL ISOBUTYL KETONE; 2-PENTANONE, 4-METHYL-; ETHYL BENZENE; BENZENE, ETHYL-

Pennsylvania

: The following components are listed: ACETIC ACID, BUTYL ESTER; BENZENE, DIMETHYL-; 1-BUTANOL; 2-HEPTANONE; 2-PROPANOL, 1-METHOXY-; METHANE, OXYBIS-; 2-PROPANONE; 2-PENTANONE, 4-METHYL-; BENZENE, ETHYL-

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
4-methylpentan-2-one ethylbenzene	Yes. Yes.	No. No.	No. 41 µg/day (ingestion) 54 µg/day (inhalation)	No. No.

Canada inventory

: All components are listed or exempted.

International regulations

International lists

: **Australia inventory (AICS):** All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

15. Regulatory information

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : FLAMMABLE AEROSOL. INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS AND NAUSEA AND MAY LEAD TO UNCONSCIOUSNESS. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. POSSIBLE CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER, BASED ON ANIMAL DATA. POSSIBLE DEVELOPMENTAL HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE ADVERSE DEVELOPMENTAL EFFECTS, BASED ON ANIMAL DATA.

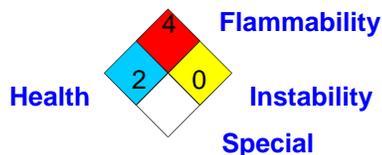
Hazardous Material Information System (U.S.A.) :

Health	*	2
Flammability		4
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

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



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16. Other information

Date of issue : 23/08/2012.
Date of previous issue : No previous validation.
Version : 1

✔ Indicates information that has changed from previously issued version.

Notice to reader

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.