

Safety Data Sheet

Mad Chemist Lacquer Retarder

Version 1.2

Revision Date: 10/03/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Mad Chemist Lacquer Retarder

Recommended use of the chemical and restrictions on use

Recommended use : Industrial chemical

Manufacturer or supplier's details

Company : Mad Chemist
Address 14271 Corporate Dr. Suite B
Garden Grove, CA, 92843
United States of America

Emergency telephone number:

Mad Chemist:-1-800-535-5053

Additional Information: : Responsible Party: Product Safety Group

Phone:

Regulatory Information number: 714-265-3744

Fax:

Email:

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 4

Acute toxicity (Oral) : Category 4

Acute toxicity
(Inhalation) : Category 4

Acute toxicity (Dermal) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

GHS Label element

Hazard pictograms :



Signal word : Warning

Hazard statements : H227 Combustible liquid.
H302 + H312 + H332 Harmful if swallowed, in contact

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with skin or if inhaled
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Carcinogenicity:

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

No component of this product present at levels greater

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than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Emergency Overview

Appearance	liquid
Colour	colourless
Odour	mild, sweet, ester-like, ether-like
Hazard Summary	No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Substance / Mixture : Substance

Hazardous components

CAS-No.	Chemical Name	Concentration (%)
111-76-2	2-Butoxy ethanol	90 - 100

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

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| In case of eye contact | : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist. |
| If swallowed | : Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician. |

SECTION 5. FIREFIGHTING MEASURES

- | | |
|---|--|
| Suitable extinguishing media | : Carbon dioxide (CO ₂) |
| Unsuitable extinguishing media | : High volume water jet |
| Hazardous combustion products | : No hazardous combustion products are known |
| Specific extinguishing methods | : Use a water spray to cool fully closed containers. |
| Further information | : For safety reasons in case of fire, cans should be stored separately in closed containments. |
| Special protective equipment for firefighters | : Wear self-contained breathing apparatus for fire-fighting if necessary. |

NFPA Flammable and Combustible Liquids Classification:

Combustible Liquid Class IIIA

SECTION 6. ACCIDENTAL RELEASE MEASURES

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|---|---|
| Personal precautions, protective equipment and emergency procedures | : Use personal protective equipment. |
| Environmental precautions | : Prevent further leakage or spillage if safe to do so. |

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Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : No smoking.
Keep in a well-ventilated place.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
111-76-2	2-Butoxy ethanol	TWA	20 ppm	ACGIH
		TWA	5 ppm 24 mg/m ³	NIOSH REL
		TWA	50 ppm 240 mg/m ³	OSHA Z-1
		TWA	25 ppm 120 mg/m ³	OSHA P0

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
2-Butoxy ethanol	111-76-	Butoxya-	Urine	End of	200 mg/g	ACGIH

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	2	cetic acid (BAA)		shift (As soon as possible after exposure ceases)	Creatinine	BEI
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Personal protective equipment

- Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
- Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.
- Skin and body protection : impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Colour : colourless
- Odour : mild, sweet, ester-like, ether-like
- Odour Threshold : 0.48 ppm
- pH : No data available
- Freezing Point (Melting point/freezing point) : -75 - -74.8 °C (-103 - -102.6 °F)
- Boiling Point (Boiling) : 166 - 173.5 °C (331 - 344.3 °F)

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point/boiling range)

Flash point : 62 - 70 °C (144 - 158 °F)
(1,013 hPa)

Evaporation rate : 0.153
(Butyl Acetate = 1)

Flammability (solid, gas) : No data available

Burning rate : No data available

Upper explosion limit : 10.6 %(V)

Lower explosion limit : 1.1 - 1.3 %(V)

Vapour pressure : 0.599 mmHg @ 20 °C (68 °F)

Relative vapour density : 4(Air = 1.0)

Relative density : 0.9005 - 0.904 @ 20 °C (68 °F)
Reference substance: (water = 1)

Density : 0.9008 g/cm³ @ 20 °C (68 °F)

Bulk density : No data available

Solubility(ies)

Water solubility : 900 g/l completely soluble @ 25 °C (77 °F)

Solubility in other sol-
vents : No data available

Partition coefficient: n-
octanol/water : log Pow: 0.81 @ 25 °C (77 °F)

Auto-ignition temperature : 230 - 245 °C 1,013 hPa

Thermal decomposition : 124.7 °C

Viscosity

Viscosity, dynamic : 3.3 - 6.4 mPa.s @ 20 °C (68 °F)

Viscosity, kinematic : 2.3 - 3.7 mm²/s @ 20 - 40 °C (68 - 104 °F)

Surface tension : 65 mN/m

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SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No hazards to be specially mentioned.
Conditions to avoid	: Keep away from heat, flame, sparks and other ignition sources.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Aldehydes Ketones Organic acids

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:

111-76-2:

Acute oral toxicity	: LD50 (Rat): 745 mg/kg Assessment: The component/mixture is moderately toxic after single ingestion.
Acute inhalation toxicity	: LC50 (Rat): 550 ppm Exposure time: 4 h Assessment: The component/mixture is moderately toxic after short term inhalation.
Acute dermal toxicity	: LD50 (Rat): 1,250 mg/kg Assessment: The component/mixture is moderately toxic after single contact with skin.

Skin corrosion/irritation

Components:

111-76-2:

Species: Rabbit
Result: Irritating to skin.

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Serious eye damage/eye irritation

Components:

111-76-2:

Species: Rabbit

Result: Irritating to eyes.

Respiratory or skin sensitisation

Components:

111-76-2:

Test Type: Maximization test

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:

111-76-2:

Genotoxicity in vitro : Test Type: Mammalian cell gene mutation assay
Test species: Chinese hamster ovary (CHO)
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Test species: Mouse (male)
Application Route: Intraperitoneal
Result: negative

Germ cell mutagenicity-Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Components:

111-76-2:

Species: Mouse

Application Route: Inhalation

Exposure time: 2 yr

Activity duration: 6 h

Frequency of Treatment: 5 days/week

NOAEL: 125 ppm

Result: Limited evidence of carcinogenic effects with no relevance to humans

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

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Reproductive toxicity

Components:

111-76-2:

Effects on fertility : Test Type: Two-generation study
Species: Mouse
Application Route: oral
Fertility: NOAEL: 720 mg/kg body weight
Symptoms: Reduced fertility
Result: Reduced fertility at maternally toxic doses

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Inhalation
Duration of Single Treatment: 10 d
Frequency of Treatment: 6 hr/day
Developmental Toxicity: Lowest observed adverse effect level: 100 ppm
Result: Developmental toxicity occurred at maternal toxicity dose levels

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

STOT - single exposure

Product:No data available

Components:

111-76-2:No data available

STOT - repeated exposure

Product:No data available

Components:

111-76-2:No data available

Repeated dose toxicity

Components:

111-76-2:

Species: Rat
NOAEL: 30
Application Route: Inhalation
Exposure time: 14 wk
Number of exposures: 6 h/d, 5 d/wk

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Aspiration toxicity

Components:

111-76-2:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

111-76-2:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 1,474 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 GLP: no
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 1,800 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: no
Toxicity to algae	: EC50 (Pseudokirchneriella subcapitata (green algae)): 911 mg/l End point: Biomass Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: no

Persistence and degradability

Components:

111-76-2:

Biodegradability	: aerobic Inoculum: Activated sludge, domestic, adaption not
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specified
Result: Readily biodegradable
Biodegradation: 90.4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: no

Bioaccumulative potential

Components:

111-76-2:

Partition coefficient: n- : log Pow: 0.83
octanol/water

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological in- : No data available
formation

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

IATA (International Air Transport Association): Not regulated as a dangerous good

IMDG-Code: Not regulated as a dangerous good

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DOT (Department of Transportation): NA1993, Combustible liquid, n.o.s., (2-BUTOXYETHANOL), CBL, III

Special Notes: : The flash point for this material is greater than 100 F (38 C). Therefore, in accordance with 49 CFR 173.150(f) non-bulk containers (<450L or <119 gallon capacity) of this material may be shipped as non-regulated when transported solely by land, as long as the material is not a hazardous waste, a marine pollutant, or specifically listed as a hazardous substance.

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Combustible Liquid, Harmful by inhalation., Harmful by ingestion., Harmful by skin absorption, Moderate skin irritant, Moderate eye irritant

WHMIS Classification : B3: Combustible Liquid
D1A: Very Toxic Material Causing Immediate and Serious Toxic Effects
D2B: Toxic Material Causing Other Toxic Effects

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

CERCLA Reportable Quantity

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

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 311/312 Hazards : Fire Hazard
Immediate (Acute) Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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

111-76-2	2-Butoxy ethanol	100 %
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Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

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This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F). The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCOMI Intermediate or Final VOC's (40 CFR 60.489):

111-76-2	2-Butoxy ethanol	100 %
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Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

111-76-2	2-Butoxy ethanol	90 - 100 %
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Pennsylvania Right To Know

111-76-2	2-Butoxy ethanol	90 - 100 %
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New Jersey Right To Know

111-76-2	2-Butoxy ethanol	90 - 100 %
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California Prop 65

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

The components of this product are reported in the following inventories:

United States TSCA Inventory	:	y (positive listing) (On TSCA Inventory)
Canadian Domestic Substances List (DSL)	:	y (positive listing) (All components of this product are on the Canadian DSL.)
Australia Inventory of Chemical Substances (AICS)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
New Zealand. Inventory of Chemical Substances	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Japan. ENCS - Existing and New Chemical	:	y (positive listing)

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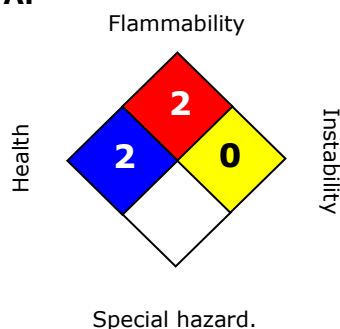
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Substances Inventory		(On the inventory, or in compliance with the inventory)
Korea. Korean Existing Chemicals Inventory (KECI)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
China. Inventory of Existing Chemical Substances in China (IECSC)	:	y (positive listing) (On the inventory, or in compliance with the inventory)

SECTION 16. OTHER INFORMATION **Further information**

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Material number:

16086770, 16086571

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Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50			Lethal Concentration 50%