



BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 16/03/2011

Revision date: 25/05/2022

Supersedes: 27/07/2016

Version: 1.1

DLM-465

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

1.1. Product identifier

Product form	: Substance
Substance name	: BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE)
EC Index-No.	: 605-012-00-5 (Unlabeled)
EC-No.	: 202-860-4 (Unlabeled)
CAS-No.	: 14132-51-5
Product code	: DLM-465
Formula	: C6D5CHO
Synonyms	: Artificial essential oil of almond
Other means of identification	: Also applicable to: DLM-465-NAT (RING-D5, 98%) (+ 0.1% HYDROQUINONE)

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

1.2.1. Relevant identified uses

Main use category	: Professional use
Industrial/Professional use spec	: For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810
USA

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)
International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Dermal)	H312
Skin Irrit. 2	H315
Resp. Sens. 1	H334
Skin Sens. 1	H317

Full text of hazard classes and H-statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xn; R21/22
Xi; R38
R42
R43
N; R51/53

Full text of R-phrases: see section 16

GHS-US classification

Flam. Liq. 4	H227
Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Dermal)	H312
Skin Irrit. 2	H315

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Resp. Sens. 1 H334
Skin Sens. 1 H317
Aquatic Acute 2 H401

Full text of H statements : see section 16

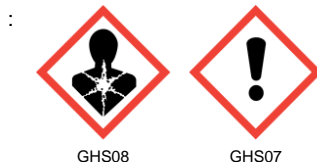
Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H302+H312 - Harmful if swallowed or in contact with skin
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements (CLP)

: P261 - Avoid breathing dust, fume, gas, mist, spray, vapors.
P264 - Wash Both hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective clothing, protective gloves.
P284 - [In case of inadequate ventilation] wear respiratory protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P302+P352 - IF ON SKIN: Wash with plenty of water.

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H227 - Combustible liquid
H302+H312 - Harmful if swallowed or in contact with skin
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled
H401 - Toxic to aquatic life

Precautionary statements (GHS-US)

: P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking.
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors.
P264 - Wash Both hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P272 - Contaminated work clothing must not be allowed out of the workplace
P273 - Avoid release to the environment.
P280 - Wear protective clothing, protective gloves.
P284 - [In case of inadequate ventilation] wear respiratory protection.
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell
P302+P352 - If on skin: Wash with plenty of water
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P312 - Call a poison center or doctor if you feel unwell
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)
P330 - Rinse mouth.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor
P362 - Take off contaminated clothing and wash before reuse.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use Alcohol resistant foam, Dry chemical to extinguish.
P403+P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents/container to Comply with applicable regulations

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2.3. Other hazards

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name : BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE)
CAS-No. : 14132-51-5
EC-No. : 202-860-4 (Unlabeled)
EC Index-No. : 605-012-00-5 (Unlabeled)

Name	Product identifier	%	Classification according to Directive 67/548/EEC
BENZALDEHYDE (RING-D5, 98%)	(CAS-No.) 14132-51-5 (EC-No.) 202-860-4 (Unlabeled) (EC Index-No.) 605-012-00-5 (Unlabeled)	99.9	Xn; R21/22 Xi; R38 R42 R43 N; R51/53
HYDROQUINONE UNLABELED	(CAS-No.) 123-31-9 (EC-No.) 204-617-8 (EC Index-No.) 604-005-00-4	0.1	Muta.Cat.1; R46 T+; R26 T; R24/25 Xn; R22 Xi; R36 Xi; R37 Xi; R39 N; R50

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
BENZALDEHYDE (RING-D5, 98%)	(CAS-No.) 14132-51-5 (EC-No.) 202-860-4 (Unlabeled) (EC Index-No.) 605-012-00-5 (Unlabeled)	99.9	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317
HYDROQUINONE UNLABELED	(CAS-No.) 123-31-9 (EC-No.) 204-617-8 (EC Index-No.) 604-005-00-4	0.1	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Inhalation:dust,mist), H330 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Carc. 2, H351 STOT SE 3, H335 Aquatic Acute 1, H400

Full text of R- and H- phrases: see section 16

Name : BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE)
CAS-No. : 14132-51-5
EC-No. : 202-860-4 (Unlabeled)
EC Index-No. : 605-012-00-5 (Unlabeled)

Name	Product identifier	%	GHS-US classification
BENZALDEHYDE (RING-D5, 98%)	(CAS-No.) 14132-51-5	99.9	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317 Aquatic Acute 2, H401
HYDROQUINONE UNLABELED	(CAS-No.) 123-31-9	0.1	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Skin Sens. 1, H317 Muta. 2, H341 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

3.2. Mixtures

Not applicable

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Wash with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
First-aid measures after ingestion	: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: May cause respiratory irritation. May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: Harmful in contact with skin. Causes skin irritation. May cause allergic skin reaction.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: Harmful if swallowed. May cause irritation of the digestive tract.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Reactivity : Not available.

5.3. Advice for firefighters

Firefighting instructions	: Wear self contained breathing apparatus for fire fighting if necessary.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: Under fire conditions, material may decompose to form flammable and/or explosive mixtures in air. Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

For containment	: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.
Methods for cleaning up	: For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Keep away from sources of ignition - No smoking. Take precautionary measures to prevent the formation of static electricity.
Precautions for safe handling	: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep container tightly closed in a cool, dry and well-ventilated place. Opened containers must be carefully resealed and kept upright to prevent leakage.
- Storage conditions : Store refrigerated (-5 °C to 5 °C). Protect from light.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE) (14132-51-5)		
USA OSHA	Remark (OSHA)	Benzaldehyde CAS No. 100-52-7 TWA 2 ppm Remarks: Dermal Sensitization Notation; STEL 4 ppm Remarks: Dermal Sensitization Notation. USA. Workplace Environmental Exposure Levels (WEEL)
BENZALDEHYDE (RING-D5, 98%) (14132-51-5)		
USA OSHA	Remark (OSHA)	Benzaldehyde CAS No. 100-52-7 TWA 2 ppm Remarks: Dermal Sensitization Notation; STEL 4 ppm Remarks: Dermal Sensitization Notation. USA. Workplace Environmental Exposure Levels (WEEL)
HYDROQUINONE UNLABELED (123-31-9)		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³ Eye irritation. Eye damage 2008 Adoption . Sensitizer.

8.2. Exposure controls

- Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
- Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



- Materials for protective clothing : Wear suitable protective clothing and gloves.
- Hand protection : Wear suitable protective clothing and gloves.
- Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.
- Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : When appropriate, use NIOSH/CEN approved respirator.
- Environmental exposure controls : Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid
Molecular mass	: 111.15 g/mol (Labeled)
Color	: Colorless to Slightly yellow
Odor	: No data available
Odor threshold	: No data available
pH	: 5.9 at 20 °C (68 °F)
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -26 °C (-15 °F) - lit.
Freezing point	: No data available
Boiling point	: 178 - 179 °C (352 - 354 °F) - lit.
Flash point	: 64 °C (147 °F) - closed cup
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 5 hPa (4 mmHg) at 45 °C (113 °F)
Relative vapor density at 20 °C	: 3.66 - (Air = 1.0)
Relative density	: No data available

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Specific gravity / density	: 1.044 g/ml at 20 °C (68 °F)
Solubility	: Water: slightly soluble
Log Pow	: 1.5
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: 1.4 - 8.5 vol % (V)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Not available.

10.2. Chemical stability

Six months after receipt if stored as stated in "Storage" section. Re-QC after six months.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

Strong oxidizing agent. Strong reducing agents. Strong bases. Alkali metals. Aluminum. Iron. Phenols. Oxygen.

10.6. Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Dermal: Harmful in contact with skin.

BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE) (14132-51-5)	
LD50 oral rat	1300 mg/kg Remarks: Behavioral: Somnolence (general depressed activity). Behavioral: Coma.
LD50 dermal rabbit	1250 mg/kg
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight

BENZALDEHYDE (RING-D5, 98%) (14132-51-5)	
LD50 oral rat	1300 mg/kg Remarks: Behavioral: Somnolence (general depressed activity). Behavioral: Coma.
LD50 dermal rabbit	1250 mg/kg
ATE CLP (oral)	500.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight

HYDROQUINONE UNLABELED (123-31-9)	
LD50 oral rat	367.3 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

Skin corrosion/irritation	: Skin - Rabbit - Mild skin irritation - 24 h pH: 5.9 at 20 °C (68 °F)
Serious eye damage/irritation	: Eyes - Rabbit Result: Mild eye irritation pH: 5.9 at 20 °C (68 °F)
Respiratory or skin sensitization	: May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	: Laboratory experiments have shown mutagenic effects.
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified

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Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Central nervous system depression. Prolonged or repeated exposure to skin causes defatting and dermatitis. Liver - Irregularities - Based on Human Evidence.
Symptoms/effects after inhalation	: May cause respiratory irritation. May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: Harmful in contact with skin. Causes skin irritation. May cause allergic skin reaction.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: Harmful if swallowed. May cause irritation of the digestive tract.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE) (14132-51-5)	
LC50 fish 1	1.07 mg/l <i>Lepomis macrochirus</i> - 96 h
EC50 Daphnia 1	50 mg/l <i>Daphnia magna</i> (Water flea) - 24 h
LC50 fish 2	62 mg/l <i>Leuciscus idus</i> (Golden orfe) - 48 h
LOEC (acute)	0.45 mg/l mortality - <i>Pimephales promelas</i> (fathead minnow) - 7 d
NOEC (acute)	0.22 mg/l mortality - <i>Pimephales promelas</i> (fathead minnow) - 7 d

BENZALDEHYDE (RING-D5, 98%) (14132-51-5)	
LC50 fish 1	1.07 mg/l <i>Lepomis macrochirus</i> - 96 h
EC50 Daphnia 1	50 mg/l <i>Daphnia magna</i> (Water flea) - 24 h
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LOEC (acute)	0.45 mg/l mortality - <i>Pimephales promelas</i> (fathead minnow) - 7 d
NOEC (acute)	0.22 mg/l mortality - <i>Pimephales promelas</i> (fathead minnow) - 7 d

HYDROQUINONE UNLABELED (123-31-9)	
LC50 fish 1	0.04 - 0.1 mg/l <i>Oncorhynchus mykiss</i> (rainbow trout) - 96 h
EC50 Daphnia 1	0.13 mg/l <i>Daphnia magna</i> (Water flea) - 48 h
ErC50 (algae)	0.335 mg/l <i>Pseudokirchneriella subcapitata</i> (green algae) - 72 h

12.2. Persistence and degradability

BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE) (14132-51-5)	
Persistence and degradability	Aerobic - exposure time: 28 d.
Biodegradation	95 % Readily biodegradable

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Persistence and degradability	Aerobic - exposure time: 28 d.
Biodegradation	95 % Readily biodegradable

HYDROQUINONE UNLABELED (123-31-9)	
Persistence and degradability	Biotic/Aerobic. Biodegradability: Result - Readily biodegradable.

12.3. Bioaccumulative potential

BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE) (14132-51-5)	
Log Pow	1.5

BENZALDEHYDE (RING-D5, 98%) (14132-51-5)	
Log Pow	1.5

HYDROQUINONE UNLABELED (123-31-9)	
BCF fish 1	0.05 mg/l <i>Leuciscus idus</i> (Golden orfe) - 3d
Bioconcentration factor (BCF REACH)	40
Log Pow	0.59

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other adverse effects : Avoid release to the environment. Disposal must be done according to official regulations.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.
- Product/Packaging disposal recommendations : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
- Ecology - waste materials : Dispose of as unused product.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

- UN-No.(DOT) : 1990
- DOT NA no. UN1990

14.2. UN proper shipping name

- Proper Shipping Name (DOT) : Benzaldehyde
- Class (DOT) : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140
- Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)



- DOT Symbols : + - Fixes (cannot be altered) proper shipping name, hazard class, and packing group
- Packing group (DOT) : III - Minor Danger
- DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
- DOT Packaging Exceptions (49 CFR 173.xxx) : 155
- DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
- DOT Packaging Bulk (49 CFR 173.xxx) : 241

14.3. Additional information

- Other information : No supplementary information available.
- Special transport precautions : Not dangerous goods.

Overland transport

- Packing group (ADR) : III
- Class (ADR) : 9 - Miscellaneous dangerous substances and articles
- Hazard identification number (Kemler No.) : 90
- Classification code (ADR) : M11
- Hazard labels (ADR) : 9 - Miscellaneous dangerous substances and articles



- Orange plates : 

- Tunnel restriction code (ADR) : E
- Limited quantities (ADR) : 5I
- EAC : 3Z
- Excepted quantities (ADR) : E1

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Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

MFAG-No : 129

Air transport

DOT Quantity Limitations Passenger aircraft/rail : 100 L
(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 220 L
CFR 175.75)

Civil Aeronautics Law : Miscellaneous dangerous substances & articles

14.4. Environmental hazards

Other information : No supplementary information available.

14.5. Special precautions for user

Special transport precautions : Not dangerous goods.

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE) (14132-51-5)

SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313

BENZALDEHYDE (RING-D5, 98%) (14132-51-5)

SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313

HYDROQUINONE UNLABELED (123-31-9)

SARA Section 302 Threshold Planning Quantity (TPQ)	Listed on the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Subject to reporting requirements of United States SARA Section 313;

15.2. International regulations

CANADA

BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE) (14132-51-5)

Listed on the Canadian DSL (Domestic Substances List)

15.2.1. National regulations

No additional information available

15.3. US State regulations

BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE)(14132-51-5)

U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No

BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE)

DLM-465

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE)(14132-51-5)	
State or local regulations	RTK - U.S. - Massachusetts - Right To Know List RTK - U.S. - Pennsylvania - RTK (Right to Know) List RTK - U.S. - New Jersey - Right to Know Hazardous Substance List

BENZALDEHYDE (RING-D5, 98%) (14132-51-5)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

HYDROQUINONE UNLABELED (123-31-9)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	

BENZALDEHYDE (RING-D5, 98%) (14132-51-5)	
State or local regulations	
RTK - U.S. - Massachusetts - Right To Know List RTK - U.S. - Pennsylvania - RTK (Right to Know) List RTK - U.S. - New Jersey - Right to Know Hazardous Substance List	

HYDROQUINONE UNLABELED (123-31-9)	
State or local regulations	
RTK - U.S. - Massachusetts - Right To Know List RTK - U.S. - New Jersey - Right to Know Hazardous Substance List RTK - U.S. - Pennsylvania - RTK (Right to Know) List	

SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Full text of R-, H- and EUH-phrases:

Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Carc. 2	Carcinogenicity Category 2
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Muta. 2	Germ cell mutagenicity Category 2
Resp. Sens. 1	Respiratory sensitization, Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization, Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H301	Toxic if swallowed
H302	Harmful if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H330	Fatal if inhaled
H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H341	Suspected of causing genetic defects
H351	Suspected of causing cancer
H400	Very toxic to aquatic life
R21/22	Harmful in contact with skin and if swallowed
R22	Harmful if swallowed
R24/25	Toxic in contact with skin and if swallowed
R26	Very toxic by inhalation
R36	Irritating to eyes

BENZALDEHYDE (RING-D5, 98%) (+0.1% HYDROQUINONE)

DLM-465

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R37	Irritating to respiratory system
R38	Irritating to skin
R39	Danger of very serious irreversible effects
R42	May cause sensitization by inhalation
R43	May cause sensitization by skin contact
R46	May cause heritable genetic damage
R50	Very toxic to aquatic organisms
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
N	Dangerous for the environment
T	Toxic
T+	Very toxic
Xi	Irritant
Xn	Harmful

NFPA health hazard

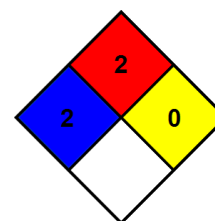
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

: 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health

: 2 Moderate Hazard - Temporary or minor injury may occur

Flammability

: 2 Moderate Hazard

Physical

: 0 Minimal Hazard

CIL Substance SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product