

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: 27/01/2011 Revision date: 15/08/2022 Supersedes: 08/11/2016 Version: 5.0 CLM-657

SECTION 1: Identification of the substance/mixture and of the company/undertaking **Product identifier** 1.1. Product form : Substance : BENZOIC ACID (CARBOXYL-13C, 99%) Substance name FC-No. : 200-618-2 (Unlabeled) CAS-No. : 3880-99-7 Product code : CLM-657 : C6H5*COOH Formula Relevant identified uses of the substance or mixture and uses advised against 1.2. 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 Details of the supplier of the safety data sheet 1.3. 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)H302Eye Dam. 1H318STOT SE 3H335

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; R22 Xi; R41 Xi; R37

Full text of R-phrases: see section 16

GHS-US classification

Acute Tox. 4 (Oral) H302 Eye Dam. 1 H318 STOT SE 3 H335

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2.	Label elements	
Labeli	ng according to Regulation (EC) No	p. 1272/2008 [CLP]
Hazaro	l pictograms (CLP)	
		GHS05 GHS07
Signal	word (CLP)	: Danger
Hazaro	I statements (CLP)	: H302 - Harmful if swallowed H318 - Causes serious eye damage H335 - May cause respiratory irritation
Precau	itionary statements (CLP)	 P261 - Avoid breathing dust, mist. P264 - Wash Both hands 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 eye protection, face protection, protective clothing, protective gloves. P301+P312 - IF SWALLOWED: Call a doctor if you feel unwell. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
GHS-U	JS labeling	
Hazaro	l pictograms (GHS-US)	
Signal	word (GHS-US)	GHS05 GHS07 : Danger
-	i statements (GHS-US)	 Banger H302 - Harmful if swallowed H318 - Causes serious eye damage H335 - May cause respiratory irritation
Precau	itionary statements (GHS-US)	 P261 - Avoid breathing dust, mist. P264 - Wash Both hands 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 eye protection, face protection, protective gloves, protective clothing. P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a poison center or doctor P312 - Call a poison center or doctor if you feel unwell P330 - Rinse mouth. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of contents/container to Comply with applicable regulations

2.3. **Other hazards**

No additional information available

Substances

SECTION 3: Com	position/Information on ingredients

Name	Product identifier	%	Classification according to Directive 67/548/EEC
BENZOIC ACID (CARBOXYL-13C, 99%)	(CAS-No.) 3880-99-7 (EC-No.) 200-618-2 (Unlabeled)	100	Xn; R22 Xi; R41 Xi; R37
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
BENZOIC ACID (CARBOXYL-13C, 99%)	(CAS-No.) 3880-99-7 (EC-No.) 200-618-2 (Unlabeled)	100	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 STOT SE 3, H335

2.4

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

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

Name	Product identifier	%	GHS-US classification
BENZOIC ACID (CARBOXYL-13C, 99%) (Main constituent)	(CAS-No.) 3880-99-7	100	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 STOT SE 3, H335

Full text of H-phrases: see section 16

3.2.	Mixtures	

Not applicable	
SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures general	: Move out of dangerous area. Consult a physician and show this safety data sheet.
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	: Flush eye with water for 15 minutes. Get medical attention.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2. Most important symptoms and eff	ects, both acute and delayed
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory tract irritation.
Symptoms/effects after skin contact	: May be harmful if absorbed through skin. May cause skin irritation.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Harmful if swallowed.
4.3. Indication of any immediate media	cal 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 s	substance or mixture
No additional information 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.
SECTION 6: Accidental release me	asures
6.1. Personal precautions, protective	equipment and emergency procedures
6.1.1. For non-emergency personnel Emergency procedures	: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.
6.1.2. For emergency responders No additional information available	
6.2. Environmental precautions	
Prevent further leakage or spillage if safe to de	o so. Do not let product enter drains. Discharge into the environment must be avoided.
6.3. Methods and material for contain	ment and cleaning up
For containment	: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers 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	: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. 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.		
Storage conditions	: Store at room temperature away from light and moisture.		
7.3. Specific end use(s)			
No additional information available			
SECTION 8: Exposure controls/perso	phal protection		
8.1. Control parameters			
BENZOIC ACID (CARBOXYL-13C, 99%) (388	D-99-7)		
DNEL/DMEL (Workers)			
Long-term - systemic effects, dermal	62.5 mg/kg bodyweight/day		
Long-term - systemic effects, inhalation	3 mg/m ³		
Long-term - local effects, inhalation	0.1 mg/m ³		
PNEC (Water)			
PNEC aqua (marine water)	0.034 mg/l		
PNEC (Sediment)			
PNEC sediment (freshwater)	1.75 mg/kg dwt		
PNEC sediment (marine water)	0.175 mg/kg dwt		
PNEC (Soil)			
PNEC soil	0.151 mg/kg dwt		
PNEC (STP)			
PNEC sewage treatment plant	100 mg/l		
Additional information	: Aquatic intermittent release- 0.331 mg/l		
8.2. Exposure controls			
Personal protective equipment	: Safety glasses. Gloves. Protective clothing. Self-contained breathing apparatus.		

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.

SECTION 9: Physical and chemical properties		
9.1. Information on basic physical and	chemical properties	
Physical state	: Solid	
Appearance	: Crystalline.	
Molecular mass	: 123.11 g/mol (Labeled)	
Color	: White.	
Odor	: No data available	
Odor threshold	: No data available	
рН	: 2.5 - 3.5 at 20 °C (68 °F)	
Relative evaporation rate (butyl acetate=1)	: No data available	
Melting point	: 121 - 125 °C (250 - 257 °F) - lit.	
Freezing point	: No data available	
Boiling point	: 249 °C (480 °F) - lit.	
Flash point	: 121 °C (250 °F) - closed cup	
Auto-ignition temperature	: 572 °C (1,062 °F)	
Decomposition temperature	: No data available	
Flammability (solid, gas)	: No data available	
Vapor pressure	: 13 hPa (10 mmHg) at 132 °C (270 °F).	
Relative vapor density at 20 °C	: 4.22 - (Air = 1.0)	
Relative density	: 1.32 g/cm3 at 20 °C (68 °F)	
Solubility	: Water: 2.9 g/l at 25 °C (77 °F)	
Log Pow	: 1.88	
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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	: No data available
9.2. Other information	
No additional information available	
SECTION 10: Stability and reactivity	
10.1. Reactivity	
No additional information available	
10.2. Chemical stability	
Stable if stored under recommended conditions.	
10.3. Possibility of hazardous reactions	
No additional information available	
10.4. Conditions to avoid	
Not available.	
10.5. Incompatible materials	
Strong oxidizing agents, Strong bases, Strong re	educing agents.
10.6. Hazardous decomposition products	i de la companya de l
formed under fire conditions: Carbon oxides.	
SECTION 11: Toxicological informat	ion
11.1. Information on toxicological effects	
Acute toxicity	: Oral: Harmful if swallowed.
•	
BENZOIC ACID (CARBOXYL-13C, 99%) (388	•
LD50 oral rat	2360 mg/kg - female. (OECD Test Guideline 401); Remarks: Behavioral:Somnolence (general depressed activity). Cyanosis
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 12.2 mg/l - 4 h
ATE CLP (oral)	
	1700.000 mg/kg body weight
ATE CLP (dermal)	1700.000 mg/kg body weight 10000.000 mg/kg body weight
	10000.000 mg/kg body weight
ATE CLP (dermal) Skin corrosion/irritation	10000.000 mg/kg body weight : Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Skin corrosion/irritation	10000.000 mg/kg body weight : Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F)
	10000.000 mg/kg body weight : Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) : Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.)
Skin corrosion/irritation	 10000.000 mg/kg body weight Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation
Skin corrosion/irritation Serious eye damage/irritation	 10000.000 mg/kg body weight Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation pH: 2.5 - 3.5 at 20 °C (68 °F)
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Skin corrosion/irritation Serious eye damage/irritation	 10000.000 mg/kg body weight Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation pH: 2.5 - 3.5 at 20 °C (68 °F) Maximisation Test - Guinea pig. Result: Does not cause skin sensitisation. (OECD Test Guideline 406)
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization	 10000.000 mg/kg body weight Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation pH: 2.5 - 3.5 at 20 °C (68 °F) Maximisation Test - Guinea pig. Result: Does not cause skin sensitisation. (OECD Test Guideline 406) No data available
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity	10000.000 mg/kg body weight : Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) : Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation pH: 2.5 - 3.5 at 20 °C (68 °F) : Maximisation Test - Guinea pig. Result: Does not cause skin sensitisation. (OECD Test Guideline 406) No data available : Ames test. S. typhimurium result: negative
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity Reproductive toxicity	10000.000 mg/kg body weight : Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) : Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation pH: 2.5 - 3.5 at 20 °C (68 °F) : Maximisation Test - Guinea pig. Result: Does not cause skin sensitisation. (OECD Test Guideline 406) No data available : Ames test. S. typhimurium result: negative : Not classified : Not available
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity	 10000.000 mg/kg body weight Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation pH: 2.5 - 3.5 at 20 °C (68 °F) Maximisation Test - Guinea pig. Result: Does not cause skin sensitisation. (OECD Test Guideline 406) No data available Ames test. S. typhimurium result: negative Not classified
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity – single exposure	 10000.000 mg/kg body weight Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation pH: 2.5 - 3.5 at 20 °C (68 °F) Maximisation Test - Guinea pig. Result: Does not cause skin sensitisation. (OECD Test Guideline 406) No data available Ames test. S. typhimurium result: negative Not classified Not available May cause respiratory irritation. No data available
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated	10000.000 mg/kg body weight : Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) : Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation pH: 2.5 - 3.5 at 20 °C (68 °F) : Maximisation Test - Guinea pig. Result: Does not cause skin sensitisation. (OECD Test Guideline 406) No data available : Ames test. S. typhimurium result: negative : Not classified : Not available : May cause respiratory irritation. No data available : Inhalation - Causes damage to organs through prolonged or repeated exposure Lungs
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Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated	10000.000 mg/kg body weight : Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) : Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation pH: 2.5 - 3.5 at 20 °C (68 °F) : Maximisation Test - Guinea pig. Result: Does not cause skin sensitisation. (OECD Test Guideline 406) No data available : Ames test. S. typhimurium result: negative : Not classified : Not available : May cause respiratory irritation. No data available : Inhalation - Causes damage to organs through prolonged or repeated exposure Lungs
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated exposure Aspiration hazard Potential Adverse human health effects and	10000.000 mg/kg body weight : Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) : Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation pH: 2.5 - 3.5 at 20 °C (68 °F) : Maximisation Test - Guinea pig. Result: Does not cause skin sensitisation. (OECD Test Guideline 406) No data available : Ames test. S. typhimurium result: negative : Not classified : May cause respiratory irritation. No data available : Inhalation - Causes damage to organs through prolonged or repeated exposure Lungs No data available : Not classified : Not classified : Inhalation - Causes damage to organs through prolonged or repeated exposure Lungs No data available : Not classified : Not classified
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated exposure Aspiration hazard Potential Adverse human health effects and symptoms	10000.000 mg/kg body weight : Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) : Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation pH: 2.5 - 3.5 at 20 °C (68 °F) : Maximisation Test - Guinea pig. Result: Does not cause skin sensitisation. (OECD Test Guideline 406) No data available : Ames test. S. typhimurium result: negative : Not classified : Not available : May cause respiratory irritation. No data available : Inhalation - Causes damage to organs through prolonged or repeated exposure Lungs No data available : Not classified : Not classified : Inhalation - Causes damage to organs through prolonged or repeated exposure Lungs No data available : Not classified : Not classified
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated exposure Aspiration hazard Potential Adverse human health effects and symptoms Symptoms/effects after inhalation	10000.000 mg/kg body weight : Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) : Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation pH: 2.5 - 3.5 at 20 °C (68 °F) : Maximisation Test - Guinea pig. Result: Does not cause skin sensitisation. (OECD Test Guideline 406) No data available : Ames test. S. typhimurium result: negative : Not classified : Not available : May cause respiratory irritation. No data available : Inhalation - Causes damage to organs through prolonged or repeated exposure Lungs No data available : Not classified : Not classified : Not classified : Inhalation - Causes damage to organs through prolonged or repeated exposure Lungs No data available : Not classified : Not classified : To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. : May be harmful if inhaled. May cause respiratory tract irritation.
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated exposure Aspiration hazard Potential Adverse human health effects and symptoms Symptoms/effects after inhalation Symptoms/effects after skin contact	 10000.000 mg/kg body weight Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation pH: 2.5 - 3.5 at 20 °C (68 °F) Maximisation Test - Guinea pig. Result: Does not cause skin sensitisation. (OECD Test Guideline 406) No data available Armes test. S. typhimurium result: negative Not classified Not available Inhalation - Causes damage to organs through prolonged or repeated exposure Lungs No data available Inhalation - Causes damage to organs through prolonged or repeated exposure Lungs No data available Not classified Inhalation in the set of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. May be harmful if inhaled. May cause respiratory tract irritation. May be harmful if absorbed through skin. May cause skin irritation.
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity – single exposure Specific target organ toxicity – repeated exposure Aspiration hazard Potential Adverse human health effects and symptoms Symptoms/effects after inhalation	10000.000 mg/kg body weight : Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) pH: 2.5 - 3.5 at 20 °C (68 °F) : Eyes - Rabbit Result: Corrosive. (Directive 67/548/EEC, Annex V, B.5.) Eyes - rabbit - Severe eye irritation pH: 2.5 - 3.5 at 20 °C (68 °F) : Maximisation Test - Guinea pig. Result: Does not cause skin sensitisation. (OECD Test Guideline 406) No data available : Ames test. S. typhimurium result: negative : Not classified : Not available : May cause respiratory irritation. No data available : Inhalation - Causes damage to organs through prolonged or repeated exposure Lungs No data available : Not classified : Not classified : Not classified : Inhalation - Causes damage to organs through prolonged or repeated exposure Lungs No data available : Not classified : Not classified : To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. : May be harmful if inhaled. May cause respiratory tract irritation.

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SECTION 12: Ecological information	
12.1. Toxicity	
BENZOIC ACID (CARBOXYL-13C, 99%) (3880	-99-7)
LC50 fish 1	44.6 mg/l - Lepomis macrochirus - 96 h
EC50 Daphnia 1	860 mg/l Immobilization EC50 - Daphnia magna (Water flea) - 48 h
ErC50 (algae)	> 33.1 mg/l static test EC50 - Pseudokirchneriella subcapitata -72 h. (OECD Test Guideline 201)
12.2. Persistence and degradability	
BENZOIC ACID (CARBOXYL-13C, 99%) (3880	-99-7)
Persistence and degradability	Expected to be biodegradable.
12.3. Bioaccumulative potential	· · · · · · · · · · · · · · · · · · ·
BENZOIC ACID (CARBOXYL-13C, 99%) (3880-	-00-7\
Bioconcentration factor (BCF REACH)	5.3
Log Pow	1.88
Bioaccumulative potential	Bioaccumulation: Leuciscus idus (Golden orfe) - 3 d 50 µg/l.
•	
12.4. Mobility in soil	
BENZOIC ACID (CARBOXYL-13C, 99%) (3880	-
Ecology - soil	Not available.
12.5. Results of PBT and vPvB assessment	t
No additional information available	
12.6. Other adverse effects	
	: An environmental hazard cannot be excluded in the event of an unprofessional handling or
	disposal. Harmful to aquatic life.
SECTION 13: Disposal considerations	5
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 / AD	N
14.1. UN number	
	: 3077
DOT NA no.	UN3077
14.2. UN proper shipping name	
	: Environmentally hazardous substances, solid, n.o.s.
	: 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140
Hazard labels (DOT)	: 9 - Class 9 (Miscellaneous dangerous materials)
DOT Symbols	G - Identifies PSN requiring a technical name
DOT Symbols	ta - joenimes PSN requiring a technical name
-	: III - Minor Danger

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DOT Special Provisions (49 CFR 172.102)	: 8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies.
	146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination.
DOT Packaging Exceptions (49 CFR 173.xxx) DOT Packaging Non Bulk (49 CFR 173.xxx) DOT Packaging Bulk (49 CFR 173.xxx)	 335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s," UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging. A112 - Notwithstanding the quantity limits shown in Column (9A) and (9B) for this entry, the following IBCs are authorized for transportation aboard passenger and cargo-only aircraft. Each IBC may not exceed a maximum net quantity of 1,000 kg: a. Metal: 11A, 11B, 11N, 21A, 21B and 21N b. Rigid plastics: 11H1, 11H2, 21H1 and 21H2 c. Composite with plastic inner receptacle: 11HZ1, 11HZ2, 21HZ1 and 21HZ2 d. Fiberboard: 11G e. Wooden: 11C, (1D and 11F (with inner liners) f. Flexible: 13H2, 13H3, 13H4, 13H5, 13L2, 13L3, 13L4, 13M1 and 13M2 (flexible IBCs must be sitt-proof and water resistant or must be fitted with a sift-proof and water resistant liner). B54 - Open-top, sift-proof rail cars are also authorized. IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31H2); Fiberboard (11C); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2). IP3 - Flexible IBCs must be sift-proof and water-resistant form
DOT RQ	: 5000 lbs
Marine pollutant	: No
14.3. Additional information	
Other information	: No supplementary information available.
Special transport precautions	: IMDG/IATA - Not dangerous goods.
Overland transport	
Packing group (ADR)	: III
Class (ADR)	: 9 - Miscellaneous dangerous substances and articles

Packing group (ADR)	: III
Class (ADR)	: 9 - Miscellaneous dangerous substances and articles
Hazard identification number (Kemler No.)	: 90
Classification code (ADR)	: M7
Hazard labels (ADR)	: 9 - Miscellaneous dangerous substances and articles

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Orange plates	90 3077
Tunnel restriction code (ADR)	: E
Limited quantities (ADR)	5kg
EAC	: 2Z
Excepted quantities (ADR)	: E1
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	: 171
Air transport	
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: No limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: No limit
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	: IMDG/IATA - 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		
BENZOIC ACID (CARBOXYL-13C, 99%) (3880-99-7)		
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard	

15.2. International regulations

CANADA

BENZOIC ACID (CARBOXYL-13C, 99%) (3880-99-7)	
Listed on the Canadian DSL (Domestic Substances List)	

15.2.1. National regulations

No additional information available

15.3. US State regulations

BENZOIC ACID (CARBOXYL-13C, 99%)(3880-99-7)	
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
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 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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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 toxicity (oral) Category 4
Serious eye damage/eye irritation Category 1
Specific target organ toxicity (single exposure) Category 3
Harmful if swallowed
Causes serious eye damage
May cause respiratory irritation
Harmful if swallowed
Irritating to respiratory system
Risk of serious damage to eyes
Irritant
Harmful

NFPA health hazard	: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
NFPA fire hazard	: 1 - Materials that must be preheated before ignition can occur.
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.
Hazard Rating	
Health	: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

: 1 Slight Hazard

: 0 Minimal Hazard

CIL Substance SDS

Flammability

Physical

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