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

1.1 Product identifier

Trade name: **Benzoic Acid Technical Grade, Flake**
REACH registration No.: 01-2119455536-33-0004
CAS-Number: 65-85-0
EC-number: 200-618-2
EU-number: 607-705-00-8

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

1.2.1 Relevant identified uses

Used in the synthesis as an intermediate for salts and esters, and as a chain stopper for alkyd resins.
Manufacture of substances

1. Use as an intermediate
   SU 10; PROC 1, 2, 3, 4, 8a, 8b, 15; PC 19; ERC 6a
2. Use as an auxiliary for polymerization
   SU 10; PROC 1, 2, 3, 4, 8a, 8b, 15; PC 32; ERC 6d
3. Use in the production of benzoate esters
   PROC 1, 2, 3, 4, 8a, 8b, 15; PC 15; ERC 6b
4. Use of lab chemicals in a professional setting
   PROC 15; PC 21; ERC 8a

1.2.2 Uses advised against

No specific uses advised against have been identified.

1.3 Details of the supplier of the safety data sheet

Company name:	Velsicol Chemical Ireland Ltd
	Charter House
Street/POB-No.:	5 Pembroke Row
Postal Code, city:	Dublin 2
	Republic of Ireland
WWW:	www.velsicol.com
E-mail:	sfriedman@velsicol.com
Telephone:	00353 1 477 3143
Telefax:	00353 1 402 9587

Dept. responsible for information: sfriedman@velsicol.com

1.4 Emergency telephone number

Telephone: +49 51 92 98970 (08:00–17:00 CET) or
CHEMTREC, Telephone: +1 703 527 3887 (24h; from USA: 1-800-424-9300)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to EC regulation 1272/2008 (CLP)

Hazard classification	Hazard statement
Skin Irrit. 2, H315	Causes skin irritation.
Eye Damage 1, H318	Causes serious eye damage.
STOT Rep. 1, H372	Causes damage to Lungs through prolonged or repeated exposure by Inhalation

2.2 Labelling elements

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

Hazard pictograms

GHS05

GHS08

Signal Word: **Danger**

Hazard statement:

H315: Causes skin irritation.
H318: Causes serious eye damage.
H372: Causes damage to Lungs through prolonged or repeated exposure by Inhalation

Precautionary statements:

P260: Do not breathe dust/fume/gas/mist/vapours/spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P264: Wash contaminated skin thoroughly after handling.
P314: Get medical advice/attention if you feel unwell.
P302+P352: IF ON SKIN: Wash with plenty of water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

2.3 Other hazards

None known

SECTION 3: Composition/information on ingredients:

3.1 Substances

Chemical Name	Synonyms	CAS No.	EC NO.	% by Weight
Benzoic Acid	Benzene carboxylic acid Benzene formic acid	65-85-0	200-618-2	99.5

Specific Concentration limits, M-Factors, Acute Toxicity Estimates (ATE)

Not available

3.2 Mixtures

Not applicable

SECTION 4: First-aid measures

4.1 Description of first aid measures

4.1.1 General information:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator). Move out of dangerous area if irritation or other symptoms occur from any route of exposure.

See Section 11 for toxicological information.

4.1.2 Following inhalation:

If inhaled, move to fresh air. If breathing is difficult, give oxygen. Seek medical attention.

4.1.3 Following skin contact:
Flush immediately the area with soap and plenty of water. Remove contaminated clothing and shoes. Seek medical attention.

4.1.4 Following eye contact:
Check for and remove any contact lenses. Flush immediately with plenty of water for at least 15 minutes. Seek medical attention.

4.1.5 Following ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Get medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

4.1.6 Self-protection of the first aider:
Wear protective gloves/protective clothing/eye protection/face protection if possible. Do not get in eyes, on skin, or on clothing. Contaminated work clothing should not be allowed out of the workplace. Get medical attention immediately if exposure occurs from any route.

4.1.7 Notes for the doctor:
Not available.

4.2 Most important symptoms and effects, both acute and delayed
See section 2 and/or section 11

4.3 Indication of any immediate medical attention and special treatments needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media
Flammability Properties: Flash point: 121°C (250°F) CC, Auto ignition temperature: 570°C (1058°F). Combustible dust.

Suitable extinguishing media: dry chemicals, water spray or alcohol-resistant foam, and CO2 (may be ineffective on larger fires due to a lack of cooling capacity).

Unsuitable extinguishing media: Do not use water jet or any method that will create dust clouds.

5.2 Special hazards arising from the substance or mixture
Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Vapor from molten benzoic acid may form explosive mixture with air.

Products of combustion are carbon oxides (CO, CO2).

5.3 Advice for fire fighters
Firefighters and others who may be exposed to products of combustion should wear full firefighting turn out gear and self-contained breathing apparatus (SCBA). Firefighting equipment should be thoroughly decontaminated after use.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.
Removal of ignition sources, provision of sufficient ventilation, avoid raising dust. Evacuate the danger area and consult an expert.

6.2 Environmental precautions

Do not allow to enter sewers / surface or ground water.
In case of spillage to water course or public sewers inform responsible authorities.

6.3 Methods and materials for containment and clearing up

Contain spill. Use spark-proof and explosion-proof tools to put the spilled solid in a convenient waste disposal container. Neutralize the residue with a dilute solution of sodium carbonate. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

6.4 References to other sections

See sections 8 and 13 for further advice.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

7.1.1 Recommendations for safe handling

Protective measures: Do not handle until all safety precautions have been read and understood; Wear suitable protective clothing, gloves and eye/face protection (see Section 8).

Measures to prevent aerosol and dust generation: Provide ventilation to minimize exposure. Avoid raising dust. Do not breathe dust/fumes/gas/mist/vapours/spray.

Measures to protect the environment: Avoid release to the environment.

7.1.2 Advices on general occupational hygiene

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding exposure through any route. Keep away from sources of ignition and avoid raising dust.

7.2 Conditions for safe storage, including any incompatibilities

7.2.1 Requirements for storerooms and containers

Store in a cool, dry, and well-ventilated area away from sources of ignition; Keep container tightly closed.

7.3 Specific end use(s)

No data available

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

8.1.1 The national occupational exposure limit values

No national limits have been set for Occupational Exposure Limit (OEL) values.

ACGIH has recommended the following exposure limits for Particulates (insoluble or poorly soluble) not otherwise specified (PNOS): 10 mg/m3 TWA (inhalable particles), 3mg/m3 TWA (respirable particles).

OSHA exposure limits for Particulates not otherwise regulated are 15 mg/m3 TWA (total dust) and 5mg/m3 TWA (respirable fraction).

8.1.2 Recommended monitoring procedures

N/A

8.1.3 Air contaminants occupational exposure limit values

N/A

8.1.4 The relevant DNELs and PNECs

N/A

DN(M)EL: Derived No(Minimal) Effect Level; NOAEL(C): No-observed-adverse-effect level (concentration),
PNEC: Predicted No-Effect Concentration

8.2 Exposure controls

8.2.1 Appropriate engineering controls:
Always provide effective general and, when necessary, local exhaust ventilation to draw dust and vapor away from workers to prevent routine inhalation.

Eliminate ignition sources (e.g., spark, static buildup, and heat, etc.).

8.2.2 Personal protective equipment (PPE):
Do not eat, drink, or smoke whilst working. Keep away from foodstuffs, beverages and feed.
Remove all contaminated clothing. Wash hands before breaks and at the end of work.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment. Use respirator in accordance with manufacturer's use limitations and OSHA standard 1910.134 (29 CFR).

Eye and face protection
Safety glasses with side shields (or goggles) and a face shield should be worn when handling this substance. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Wear chemical resistant (impervious) gloves and a complete personal protective suit. Gloves and cloth must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

8.3 Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	White flakes/powder
Odour:	Slight mild odour
Odour threshold:	no data available
pH:	2.5 - 3.5 at 20 °C (68 °F, saturated solution)
Melting/Freezing point:	121 - 125 °C (250 - 257 °F) - lit
Boiling point:	249 °C (480 °F) @ 760 mm Hg
Flashpoint:	121.9°C (251.4 °F)
Evaporation rate:	Not available
Flammability:	Not flammable
Vapour pressure:	0.0011 hPa @ 20°C (68 °F)
Vapour density:	4.22 (Air=1)
Specific density:	1.321 at 20°C
Refractive index:	No data available
Solubility in water:	3.5 g/l at 25 °C (77 °F)
Solubility in other solvents:	No data available
Partition coefficient:	log Pow:1.88
Volatile by weight	Not available
Auto ignition temperature:	Not available

Decomposition temperature:	Not available
Viscosity	Not available
Explosive properties	Not considered to be explosive
Oxidising properties	Not considered to be oxidising
Dissociation Constant:	Not available
Molecular Weight	122.12

9.2 Other information

Some of the number specified are typical values and do not represent a specification.

SECTION 10: Stability and reactivity

10.1 Reactivity

Not a reactive substance and no reactive hazards are expected.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

No hazardous reactions expected under normal conditions of use.

10.4 Conditions to avoid

Excessive heat and ignition sources. Avoid static discharge. Avoid dust formation.

10.5 Incompatible materials

Strong oxidizing agents, Strong bases, Strong reducing agents. Avoid contact with metals.

10.6 Hazardous decomposition products

Carbon dioxide, carbon monoxide.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Hazard via oral, inhalation, and dermal route

Acute toxicity

LD50 Oral - rat > 2,250 mg/kg; LC50 Inhalation - rat - 4 h > 12.2 mg/l; LD50 Dermal - rabbit > 2,000 mg/kg

Skin corrosion/irritation

Mild skin irritation – rabbit, 24 h

Serious eye damage/irritation

Risk of serious damage to eyes - rabbit.

Respiratory/skin sensitisation

No evidence of skin sensitization (Guinee Pig).

Germ cell mutagenicity

Not classified

Carcinogenicity

Not classified. Not listed or regulated by IARC, NTP, OSHA, or ACGIH

Reproductive toxicity

Not classified.

STOT-single exposure

Not classified

STOT-repeated exposure
Causes damage to Lungs through prolonged or repeated exposure by Inhalation – rat.
The NOAEL for local effects is < 25 mg/m3; The NOAEL for systemic effects is 250 mg/m3.

Aspiration hazard
Not classified.

Additional Information
RTECS: DG0875000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

11.2 Information on other hazards
No data available.

SECTION 12: Ecological information

12.1. Toxicity
Fish: 96 hr LC50 (Bluegill Sunfish): 44.6mg/L; 96 hr LC50 (Rainbow Trout): 47.3mg/L; Chronic NOEC >120 mg/L (28 days)
Invertebrates: 48 hr EC50: >100mg/L; 24 hr EC50: 102-500 mg/L; Chronic NOEC: >=25 mg/L (21 days)
Algae: 72 hr EC50: >33.1 mg/L; Chronic NOEC: EC10 = 3.4 mg/L (72 hr)

12.2 Persistence and degradability
Readily biodegradable and therefore is not Persistence.

12.3 Bioaccumulative potential
Log Kow = 1.88, Bio-concentration factor (BCF): 5.3, not bio-accumulative.

12.4 Mobility in soil
No specific information available

12.5 Results of PBT and vPvB assessment
The substance was found to be readily biodegradable under aerobic conditions, not a PBT or vPvB

12.6 Other adverse effects
No information available.

SECTION 13: Disposal considerations

Incinerate in a properly permitted facility in accordance with federal, state and local regulation or regional authorities.

SECTION 14: Transport information

DOT (US): When shipped over 5000 lbs (2270 kg) in a single package:
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Benzoic acid)
Reportable Quantity (RQ): 5000 lbs (2270 kg)
Marine pollutant: No
Poison Inhalation Hazard: No

This substance is not a dangerous good under ADR, IMDG, and IATA.
International HTS# 2916.31.1105

SECTION 15: Regulatory information

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

National regulations - EC member states
Not known.

National regulations – USA
TSCA Inventory: Active

HMIS Rating
Health: 2 Flammability: 1 Reactivity (Stability): 0 Personal Protection: X
NFPA Rating
Health: 2 Flammability: 1 Reactivity (Stability): 0 Specific Hazard: X

SARA 311/312 Hazards
Acute Health Hazard

Massachusetts Right To Know Components
Benzoic acid, CAS-No.:65-85-0, Revision Date: 2007-03-01

Pennsylvania Right To Know Components
Benzoic acid, CAS-No.: 65-85-0, Revision Date: 2007-03-01

New Jersey Right To Know Components
Benzoic acid, CAS-No.: 65-85-0, Revision Date: 2007-03-01

California Prop. 65 Components
Not listed

National regulations – Canada
Canadian Workplace Hazardous Material Information System (WHMIS) classification: D2B

15.2 Chemical Safety Assessment
For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

16.1 Indication of changes
V1: 2019-11-08 This is the first SDS under REACH
V2: 2022-05-17, review and minor format changes.
V3: 2022-10-27, revision according to COMMISSION REGULATION (EU) 2020/878
26 September, 2024: Update in in Section 16: change delete fax number

16.2 Key literature references and sources for data
Dossier and Chemical Safety Report (CSR) submitted to ECHA under REACH
EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP), 2015/830 & 2020/878
Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)) and Appendix B, C, D
Information on Chemicals, ECHA website: http://echa.europa.eu/web/guest/home
Product Data Sheet and SDS information from manufacturer.

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

16.3 List of relevant hazard statements and/or precautionary statements which are not written out in full under Sections 2 to 15

Precautionary statements:

P270: Do not eat, drink or smoke when using this product.
P321: Call a POISON CENTER or doctor/physician if you feel unwell.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P362: Take off contaminated clothing.
P310: Immediately call a POISON CENTER/doctor.
P501: Dispose of contents/container to an approved waste disposal plant.

16.4 Contact Information

SDS or Regulatory information, contact: Dawei Li Velsicol Chemical LLC 1199 Warford Street Memphis, TN 38108 Phone: 901-323-6226, ext. 124 dli@velsicol.com	Technical or Product Support Information, contact: Sherman Friedman Velsicol Chemical LLC 10400 W. Higgins Road Rosemont, IL 60018 U.S.A. Phone: 847-635-3486 Email: sfriedman@velsicol.com

16.5 Further information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision.

It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.