

**BICAR ® INDUSTRIAL GRADE**

Revision Date 01/21/2021

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

- Trade name	BICAR ® INDUSTRIAL GRADE
- Chemical name	Sodium hydrogencarbonate
- Synonyms	Sodium bicarbonate
- Molecular formula	NaHCO <sub>3</sub>

CHEMICALS INC  
270 OSBORNE DR.  
FAIRFIELD, OH 45014  
513-682-2000

**1.2 Relevant identified uses of the substance or mixture and uses advised against****Uses of the Substance / Mixture**

- Food/ feedstuff additives
- Detergent
- Chemical industry
- Glass industry
- Foaming agent
- Water treatment
- Environmental protection
- Purifying flue gas
- Animal feedstuff

**1.3 Details of the supplier of the safety data sheet****Company**

SOLVAY CHEMICALS, INC.  
3737 Buffalo Speedway,  
Suite 800,  
Houston, TX 77098  
USA  
Tel: +1-800-7658292; +1-713-5256800  
Fax: +1-713-5257804

**1.4 Emergency telephone**

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CONTACT CHEMTREC (24-Hour Number): 800-424-9300 within the United States and Canada, or 703-527-3887 for international collect calls.

**SECTION 2: Hazards identification**

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

**2.1 Classification of the substance or mixture****HCS 2012 (29 CFR 1910.1200)**

- Not a hazardous product according to the OSHA Globally Harmonized System (GHS).

**2.2 Label elements****HCS 2012 (29 CFR 1910.1200)**

- Not a hazardous product according to the OSHA Globally Harmonized System (GHS).

**2.3 Other hazards which do not result in classification**

None identified

**SECTION 3: Composition/information on ingredients****3.1 Substance**

- Chemical name Sodium hydrogencarbonate

**Hazardous Ingredients and Impurities**

- No ingredients are hazardous.

**3.2 Mixture**

- Not applicable, this product is a substance.

**SECTION 4: First aid measures****4.1 Description of first-aid measures****In case of inhalation**

- Move to fresh air.
- If symptoms persist, call a physician.

**In case of skin contact**

- Wash off with soap and water.

**In case of eye contact**

- Rinse thoroughly with plenty of water, also under the eyelids.
- If eye irritation persists, consult a specialist.

**In case of ingestion**

- Rinse mouth with water.
- If symptoms persist, call a physician or Poison Control Center immediately.

**4.2 Most important symptoms and effects, both acute and delayed****In case of inhalation****Effects**

- No hazards to be specially mentioned.

**In case of skin contact****Effects**

- No hazards to be specially mentioned.

***Repeated or prolonged exposure***

- Contact with dust can cause mechanical irritation or drying of the skin.

**In case of eye contact****Effects**

- Dust contact with the eyes can lead to mechanical irritation.

**In case of ingestion**

**Effects**

- Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**4.3 Indication of any immediate medical attention and special treatment needed****Notes to physician**

- When symptoms persist or in all cases of doubt seek medical advice.

**SECTION 5: Firefighting measures****Flash point**

Not applicable, inorganic

**Autoignition temperature**

The product is not flammable.

**Flammability / Explosive limit**

No data available

**5.1 Extinguishing media****Suitable extinguishing media**

- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media**

- None.

**5.2 Special hazards arising from the substance or mixture****Hazardous combustion products:**

- none

**5.3 Advice for firefighters****Special protective equipment for fire-fighters**

- In the event of fire, wear self-contained breathing apparatus.
- Use personal protective equipment.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures****Advice for non-emergency personnel**

- Evacuate personnel to safe areas.
- Avoid dust formation.

**Advice for emergency responders**

- Use personal protective equipment.
- Sweep up to prevent slipping hazard.
- Prevent further leakage or spillage.

**6.2 Environmental precautions**

- Do not flush into surface water or sanitary sewer system.
- Prevent any mixture with an acid into the sewer/drain (gas formations).

**6.3 Methods and materials for containment and cleaning up**

- Pick up and transfer to properly labeled containers.
- Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

- Refer to protective measures listed in sections 7 and 8.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

- Ensure adequate ventilation.
- Minimize dust generation and accumulation.
- Avoid contact with skin and eyes.
- Keep away from incompatible products

**Hygiene measures**

- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

**7.2 Conditions for safe storage, including any incompatibilities****Technical measures/Storage conditions**

- Store in original container.
- Keep in a dry place.
- Keep in properly labeled containers.
- Keep container closed.
- Keep away from:
- Incompatible products

**Packaging material****Suitable material**

- Paper.
- Polyethylene
- Polypropylene
- Woven plastic material.
- Polyethylene

**Unsuitable material**

- No data available

**7.3 Specific end use(s)**

- no data available

**SECTION 8: Exposure controls/personal protection**

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

**8.1 Control parameters**

- Contains no substances with occupational exposure limit values.

**8.2 Exposure controls****Control measures****Engineering measures**

- Provide appropriate exhaust ventilation at places where dust is formed.
- Apply technical measures to comply with the occupational exposure limits.

**Individual protection measures****Respiratory protection**

- Use only respiratory protection that conforms to international/ national standards.
- Use NIOSH approved respiratory protection.

**Hand protection**

- Impervious gloves

**Eye protection**

- Safety goggles

**Skin and body protection**

- No special protective equipment required.

**Hygiene measures**

- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

**SECTION 9: Physical and chemical properties**

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

**9.1 Information on basic physical and chemical properties**

<b><u>Physical state</u></b>	solid
<b><u>Form</u></b>	crystalline, powder
<b><u>Color</u></b>	white
<b><u>Odor</u></b>	odorless
<b><u>Odor Threshold</u></b>	No data available
<b><u>Melting point/freezing point</u></b>	<u>Melting point/range:</u>

	Decomposition: yes
<b><u>Initial boiling point and boiling range</u></b>	<u>Boiling point/boiling range:</u> Thermal decomposition: yes
<b><u>Flammability (solid, gas)</u></b>	The product is not flammable.
<b><u>Flammability (liquids)</u></b>	No data available
<b><u>Flammability / Explosive limit</u></b>	No data available
<b><u>Flash point</u></b>	Not applicable, inorganic
<b><u>Autoignition temperature</u></b>	No data available
<b><u>Decomposition temperature</u></b>	> 122 °F (> 50 °C)
<b><u>pH</u></b>	8.4 (ca. 8.4 g/l) ( 77 °F (25 °C)) Water 8.6 (ca. 52 g/l) <u>pKa:</u> 6.3
<b><u>Viscosity</u></b>	<u>Viscosity, dynamic</u> : Not applicable
<b><u>Solubility</u></b>	<u>Water solubility:</u> 69 g/l ( 32 °F (0 °C)) 93 g/l ( 68 °F (20 °C)) 165 g/l ( 140 °F (60 °C)) <u>Solubility in other solvents:</u> Other: soluble  Alcohol: slightly soluble
<b><u>Partition coefficient: n-octanol/water</u></b>	Not applicable, inorganic
<b><u>Vapor pressure</u></b>	Thermal decomposition
<b><u>Density</u></b>	2.21 kg/dm <sup>3</sup>  <u>Bulk density:</u> 500 - 1,300 kg/m <sup>3</sup>
<b><u>Relative density</u></b>	2.21 - 2.23 ( 68 °F (20 °C))
<b><u>Relative vapor density</u></b>	Not applicable
<b><u>Particle characteristics</u></b>	No data available
<b><u>Evaporation rate (Butylacetate = 1)</u></b>	No data available

## 9.2 Other information

<b><u>Explosiveness</u></b>	Not expected
<b><u>Oxidizing properties</u></b>	Not expected
<b><u>Self-ignition</u></b>	The product is not flammable.
<b><u>Molecular weight</u></b>	84.01 g/mol

**SECTION 10: Stability and reactivity****10.1 Reactivity**

- Incompatible with acids.
- Decomposes slowly on exposure to water.

**10.2 Chemical stability**

- Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

- none

**10.4 Conditions to avoid**

- Exposure to moisture.
- To avoid thermal decomposition, do not overheat.

**10.5 Incompatible materials**

- Acids

**10.6 Hazardous decomposition products**

- none

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity****Acute oral toxicity**

LD50 : > 4,000 mg/kg - Rat , male and female  
Method: according to a standardized method  
The product has a low acute toxicity  
Unpublished reports

**Acute inhalation toxicity**

LC50 - 4.5 h ( dust/mist ) : > 4.74 mg/l - Rat , male and female  
Method: according to a standardized method  
Not classified as hazardous for acute inhalation toxicity according to GHS.  
Unpublished reports  
Dust

**Acute dermal toxicity**

No data available

**Acute toxicity (other routes of administration)**

No data available

**Skin corrosion/irritation**

Rabbit  
slight irritation  
Method: OECD Test Guideline 404  
Unpublished reports

**Serious eye damage/eye irritation**

Rabbit  
slight irritation  
Method: OECD Test Guideline 405  
Unpublished reports

**Respiratory or skin sensitization**

No data available

**Mutagenicity****Genotoxicity in vitro**

Strain: Escherichia coli  
with and without metabolic activation

negative  
Method: according to a standardized method  
Published data

Ames test  
with metabolic activation

negative  
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)  
Published data

**Genotoxicity in vivo**

No data available

**Carcinogenicity**

No data available

This product does not contain any ingredient designated as probable or suspected human carcinogens by:

NTP  
IARC  
OSHA

**Toxicity for reproduction and development****Toxicity to reproduction / fertility**

No data available

**Developmental Toxicity/Teratogenicity**

Rat, female, Oral  
Teratogenicity NOAEL:> 340mg/kg  
Method: according to a standardized method  
Highest dose tested, The product is not considered to be embryotoxic / fetotoxic.,  
Unpublished reports

Rabbit, female, Oral  
Teratogenicity NOAEL:> 330mg/kg  
Method: according to a standardized method  
Highest dose tested, The product is not considered to be embryotoxic / fetotoxic.,  
Unpublished reports

**STOT****STOT-single exposure**



Routes of exposure: Oral, Inhalation  
 The substance or mixture is not classified as specific target organ toxicant, single exposure according to GHS criteria.  
 internal evaluation

**STOT-repeated exposure** No data available

**Experience with human exposure** No data available

**Aspiration toxicity** No data available

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic Compartment

##### Acute toxicity to fish

LC50 - 96 h : 7,100 mg/l - Lepomis macrochirus (Bluegill sunfish)  
 flow-through test  
 Analytical monitoring: yes

Method: according to a standardized method  
 Unpublished internal reports  
 Not harmful to fish (LC/LL50 > 100 mg/L)

##### Acute toxicity to daphnia and other aquatic invertebrates

EC50 - 48 h : 4,100 mg/l - Daphnia magna (Water flea)  
 flow-through test  
 Analytical monitoring: yes  
 Method: according to a standardized method  
 Unpublished internal reports  
 Not harmful to aquatic invertebrates. (EC/EL50 > 100 mg/L)

##### Toxicity to aquatic plants

No data available

##### Toxicity to microorganisms

No data available

##### Chronic toxicity to fish

No data available

##### Chronic toxicity to daphnia and other aquatic invertebrates

NOEC: > 576 mg/l - 21 Days - Daphnia magna (Water flea)  
 semi-static test  
 Analytical monitoring: no  
 Method: OECD Test Guideline 211  
 Highest concentration tested  
 Published data  
 No adverse chronic effect observed up to and including the threshold of 1 mg / L.

### 12.2 Persistence and degradability

#### Abiotic degradation

##### Stability in water

Product dissociates rapidly to corresponding ions on contact with water.

**Physical- and photo-chemical  
elimination**

No data available

**Biodegradation**

**Biodegradability**

Not applicable, inorganic substance

**12.3 Bioaccumulative potential**

**Partition coefficient: n-octanol/water**

Not applicable, inorganic substance

**Bioconcentration factor (BCF)**

According to the available data on the constituents  
Not potentially bioaccumulable  
Expert judgment

**12.4 Mobility in soil**

**Adsorption potential (Koc)**

According to the available data on the constituents  
non-significant adsorption  
internal evaluation

**Known distribution to environmental  
compartments**

No data available

**12.5 Results of PBT and vPvB assessment**

Not applicable, inorganic substance

**12.6 Other adverse effects**

**Ecotoxicity assessment**

**Short-term (acute) aquatic hazard**

Not harmful to aquatic life (LC/LL50, EC/EL50 > 100 mg/L)

**Long-term (chronic) aquatic hazard**

No adverse chronic effect observed up to and including the threshold of 1 mg / L.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Product Disposal**

- Contact waste disposal services.
- If recycling is not practicable, dispose of in compliance with local regulations.
- Dilute with plenty of water.
- Neutralize with acid.
- In accordance with local and national regulations.

**Waste Code**

- Environmental Protection Agency
- Hazardous Waste – NO

**Advice on cleaning and disposal of packaging**

- Where possible recycling is preferred to disposal or incineration.
- Clean container with water.
- Dispose of rinse water in accordance with local and national regulations.
- Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

**SECTION 14: Transport information****DOT**

not regulated

**TDG**

not regulated

**NOM**

not regulated

**IMDG**

not regulated

**IATA**

not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

**SECTION 15: Regulatory information****15.1 Notification status**

Inventory Information	Status
United States TSCA Inventory	- All substances listed as active on the TSCA inventory
Canadian Domestic Substances List (DSL)	- Listed on Inventory
Australia Inventory of Chemical Substances (AICS)	- Listed on Inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	- Listed on Inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- Listed on Inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- Listed on Inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	- Listed on Inventory
Taiwan Chemical Substance Inventory (TCSI)	- Listed on Inventory
New Zealand. Inventory of Chemical Substances	- All components are listed on the NZIoC inventory. Additional HSNO obligations may apply. Please refer to Section 15 of SDS for New Zealand.

EU. European Registration, Evaluation, Authorization and Restriction of Chemical (REACH)	- When purchased from a Solvay legal entity based in the EEA ("European Economic Area"), this product is compliant with the registration provisions of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, and/or registered. When purchased from a legal entity outside of the EEA, please contact your local representative for additional information.
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## 15.2 Federal Regulations

### US. EPA EPCRA SARA Title III

#### **SARA HAZARD DESIGNATION SECTIONS 311/312 (40 CFR 370)**

No SARA Hazards

#### **Section 313 Toxic Chemicals (40 CFR 372.65)**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### **Section 302 Emergency Planning Extremely Hazardous Substance Threshold Planning Quantity (40 CFR 355)**

This material does not contain any components with a section 302 EHS TPQ.

#### **Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355)**

This material does not contain any components with a SARA 302 RQ.

#### **Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355)**

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

### US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

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

## 15.3 State Regulations

### US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

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

## **SECTION 16: Other information**

### NFPA (National Fire Protection Association) - Classification

Health	1 slight
Flammability	0 minimal
Instability or Reactivity	0 minimal
Special Notices	None

### HMIS (Hazardous Materials Identification System (Paint & Coating)) - Classification

Health	1 slight
Flammability	0 minimal
Reactivity	0 minimal

PPE

Determined by User; dependent on local conditions

**Further information**

- Distribute new edition to clients
- Update
- See section 1

**Date Prepared:** 01/21/2021**Key or legend to abbreviations and acronyms used in the safety data sheet**

- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- NTP: National Toxicology Program
- IARC: International Agency for Research on Cancer
- NIOSH: National Institute for Occupational Safety and Health
- ADR: European Agreement on International Carriage of Dangerous Goods by Road.
- ADN: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways.
- RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
- IATA: International Air Transport Association.
- ICAO-TI: Technical Specification for Safe Transport of Dangerous Goods by Air.
- IMDG: International Maritime Dangerous Goods.
- TWA: Time weighted average
- ATE: Estimated value of acute toxicity
- EC: European Community number
- CAS: Chemical Abstracts Service.
- LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).
- LC50: Substance concentration causing 50% (half) death in the test animals group.
- EC50: Effective Concentration of the substance causing the maximum of 50%.
- PBT: Persistent, Bioaccumulative and Toxic substance.
- vPvB: Very Persistent and Very Bioaccumulative.
- SEA: Classification, labeling, packaging regulation
- DNEL: Derived No Effect Level
- PNEC: Predicted No Effect Concentration
- BHOT: Specific Target Organ Toxicity

**Not all acronyms listed above are referenced in this SDS.**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.