

SAFETY DATA SHEET

SDS-EUEN-2017

Date Updated : 05th. April. 2017

Version : 5.0/EN.

Regulation : In accordance with Regulation (EU) 453/2010 (REACH), Annex II

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Name of substance : BB, BB8055, BL, BL8050, BR, BR8040, BR-V, HR, HR7155

NOTE : Not all the above grades are available in all markets.

Synonyms : Polyethylene terephthalate (PET)

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

Relevant identified uses : Plastics.

Uses advised against : Not available.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier : SK Chemicals GmbH

Street address/P.O. Box : Mergenthalerallee 77, 65760 Eschborn, Germany

Telephone number (if possible, indicate telefax) : +49 6196 9020610 : +49 6916 9020629)

National contact : Not available.

1.4 Emergency Telephone

Emergency Telephone number : +49 6196 9020610

Opening hours : 09:00 ~ 17:00 (GMT +1).

Other comments (e.g. language(s) of the phone service) : Not available. **SECTION 2 : HAZARDS IDENTIFICATION**

2.1 Classification of the substance or mixture

Is not classified according to Regulation (EC) No 1272/2008 [CLP] and Directive 67/548/EEC.

2.2 Label elements

Hazard pictograms : Not applicable.

Signal word : Not applicable.

Hazard statement : Not applicable.

Additional precautionary statements : Not applicable.

2.3 Other hazards

According to Annex XIII, the substance does not meet PBT or vPvB criteria.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Product list of 1.1

Component	Additional identification	Conc. / %	Classification
Polyethylene terephthalate	proprietary	100	See section.2

SECTION 4 : FIRST-AID MEASURES

4.1 Description of first aid measures

After eye contact :

- Seek medical attention if eye symptoms occur.
- In case of contact with molten substance, immediately flush eyes with water for at least 15 minutes. Seek medical attention immediately.

After skin contact :

- Remove contaminated clothing and shoes.
- Seek medical attention if skin symptoms occur.
- If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water, and see a physician for removal of adhering material and treatment of burns.

After inhalation :

- Specific medical treatment is urgent.
- Move victim to fresh air.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.

After ingestion :

- Get medical attention if swallowed amount of substance.

4.2 Most important symptoms and effects, both acute and delayed**Acute effects**

Not classified.

Delayed effects

Not classified.

4.3 Indication of immediate medical attention and special treatment needed

- Call emergency medical service. Seek medical advice/attention if needed.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- If burned by contact with molten material, cool as quickly as possible with water, and then go to see a physician for treatment of burns.

SECTION 5 : FIRE-FIGHTING MEASURES**5.1 Extinguishing media**

- Suitable extinguishing media: CO₂, water, sand.
- Unsuitable extinguishing media: High pressure water.

5.2 Special hazards arising from the substance or mixture

- Thermal decomposition products: Not available.
- Hazardous combustion products: CO₂, CO.
- Unusual fire and explosion hazards: No explosion hazards.

5.3 Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural fire fighters' protective clothing will only provide limited protection.

SECTION 6 : ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

- Stop leak if you can do it without risk.
- Isolate exposed area.
- Keep unauthorised personnel away.
- Use certificated protective equipment.
- Ventilate the leaked area.

6.2 Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

- Do not touch or walk through spilled material.

6.4 Reference to other sections

- See also sections 8 and 13 of this Safety Data Sheet.

SECTION 7 : HANDLING AND STORAGE**7.1 Precautions for safe handling**

- Avoid contact with molten material.

- Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures.

7.2 Conditions for safe storage, including any incompatibilities

- Keep container closed.
- Store container in a well dry/cool place.
- Keep away from waterways and sewers.
- Keep away from any source of ignition.

7.3 Specific end use(s)

Not available.

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limits

- EU regulation :** Not available.
- Korea regulation :** Not available.
- ACGIH regulation :** Not available.
- Biological exposure index :** Not available.
- OSHA regulation :** Not available.
- NIOSH regulation :** Not available.

Occupational exposure controls :

8.2 Exposure controls

8.2.1 Appropriate engineering controls :

- Provide local exhaust ventilation system or other engineering controls to keep the airborne below their respective threshold limit value.
- Check legal suitability of exposure level.

8.2.2 Individual protection measures, such as personal protective equipment :

Respiratory protection :

- Wear European Standard EN 149 approved full or half face piece (with goggles) respiratory protective equipment when necessary.

Eye/face protection :

- An eye wash unit and safety shower station should be available nearby work place.
- Wear safety glasses to protect eyes.

Skin protection

(i) Hand protection :

- When material is heated, wear gloves to protect against thermal burns.

(ii) Other :

- When material is heated, wear gloves to protect against thermal burns.

8.2.3 Environmental exposure controls

Not available.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

- Description :** Solid.
- Color :** Not available.

Odor : Slight odour.

Odor threshold : Not available.

pH : Not available.

Melting point/freezing point : Not available.

Initial boiling point and boiling range : Not available.

Flash point : Not available.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Upper/lower flammability or explosive limits : Not available.

Vapour pressure : Negligible (20 °C).

Solubility (ies) : Negligible.

Vapor density : Not available.

Relative density : 1.34 g/ml (25 °C).

Specific gravity : > 1

Partition coefficient: n-octanol/water : Not available.

Auto ignition temperature : 500 °C (cloud).

Decomposition temperature : Not available.

Viscosity : Not available.

Explosive properties : Not available.

Oxidizing properties : Not available.

Molecular weight : Not available.

9.2 Other information

Not available.

SECTION 10 : STABILITY AND REACTIVITY

10.1 Reactivity

- Some of these materials may burn, but none ignite readily.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Containers may explode when heated.

- Fire may produce irritating and/or toxic gases.

- Some liquids produce vapours that may cause dizziness or suffocation.

- Inhalation of material may be harmful.

10.4 Conditions to avoid

- Avoid contact with incompatible materials.

- Avoid release to the environment.

10.5 Incompatible materials

- Combustibles.

10.6 Hazardous decomposition products

- Irritating and/or toxic gases.

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

(a) Acute toxicity;

Oral Not available.

Dermal Not available.

Inhalation Not available.

(b) Skin Corrosion/
Irritation; Molten material will produce thermal burns.

(c) Serious Eye
Damage/ Irritation; Molten material will produce thermal burns.

(d) Respiratory
sensitisation; Not available.

(e) Skin Sensitisation; Not available.

(f) Carcinogenicity; EU Regulation 1272/2008, KOREA-ISHL, IARC, NTP, OSHA, ACGIH: Not listed.

(g) Mutagenicity; Polyethylene terephthalate (PET) was tested as a source of mutagen contamination from bottles used for beverage packaging. PET bottles were filled with mineral water and stored in daylight and in the dark for different periods of time. The water samples were concentrated and the concentrates (non-volatile compounds) tested for mutagenicity with the Ames test (static tests). Total organic carbon (TOC) leaching was determined concurrently. Leaching of mutagens was also studied using dynamic tests; shaking distilled water in PET bottles. New methods were also used to test the leaching potential of both volatile and non-volatile compounds: directly testing the mutagenicity in unconcentrated water stored in PET bottles and growing Salmonella strains directly in the plastic bottles. The results were positive only for the static test, which identified leaching of mutagens after 1 month of storage in PET bottles. This activity was higher after storage in daylight.

- (h) Reproductive toxicity; Not available.
- (i) Specific target organ toxicity (single exposure); In a 1-month study, rats received wine extracts obtained after several months contact with PET. The treatment produced no harmful effect on animals.
- (j) Specific target organ toxicity (repeat exposure); Rats were given 5.0 to 400 mg technical grade PET/kg BW and 5.0 to 100 mg pure. PET/kg BW over a 3-month period. There were no changes in their behavior, BW gain, biochemical indices of blood serum, urine, or hematology analyses, or in relative weights of internal organs.
- (k) Aspiration Hazard; Not available.

SECTION 12 : ECOLOGICAL INFORMATION

12.1 Toxicity

Acute toxicity Not available.

Chronic toxicity Not available.

12.2 Persistence and Degradability Persistence : Not available.

Degradability : PET is subject to various types of degradations during processing. The main degradations that can occur are hydrolytic, thermal and, probably most important, thermal oxidation. When PET degrades, several things happen: discoloration, chain scissions resulting in reduced molecular weight, formation of acetaldehyde and cross-links ("gel" or "fish-eye" formation). Discoloration is due to the formation of various chromophoric systems following prolonged thermal treatment at elevated temperatures. This becomes a problem when the optical requirements of the polymer are very high, such as in packaging applications. The thermal and thermooxidative degradation results in poor processibility characteristics and performance of the material.

12.3 Bioaccumulative potential Bioaccumulation : Not available.

Biodegradation : Not biodegradable.

12.4 Mobility in soil Not available.

12.5 Results of PBT and vPvB assessment Not available.

12.6 Other adverse effects

Commentary published in Environmental Health Perspectives in April 2010 suggested that PET might yield endocrine disruptors under conditions of common use and recommended research on this topic. Proposed mechanisms include leaching of phthalates as well as leaching of antimony. Other authors (Franz and Welle) published evidence based on mathematical modeling, indicating that it is quite unlikely that PET yields endocrine disruptors in mineral water.

SECTION 13 : DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from residues

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Container

Consider the required attentions in accordance with waste treatment management regulation.

SECTION 14 : TRANSPORT INFORMATION

14.1 UN Number

ADR/RID(International Carriage of Dangerous Goods by Rail and by Road) : Not applicable.

DOT (US Department of Transportation) : Not applicable.

IMDG (International Maritime Dangerous Goods Code) : Not applicable.

IATA (International Air Transport Association) : Not applicable.

- 14.2 UN Proper shipping name**
ADR/RID, DOT, IMDG, IATA : Not dangerous goods.
- 14.3 Transport Hazard class**
ADR/RID, DOT, IMDG, IATA : Not applicable.
- 14.4 Packing group**
ADR/RID, DOT, IMDG, IATA : Not applicable.
- 14.5 Environmental hazards**
ADR/RID, DOT, IMDG, IATA : No.
- 14.6 Special precautions for user**
in case of fire : Not applicable.
in case of leakage : Not applicable.
- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not available.

SECTION 15 : REGULATORY INFORMATION

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

EU Regulatory Information

EU classification :

Annex I of Directive 67/548/EEC :

Classification : Not regulated.

Risk phrases : Not regulated.

Safety phrases : Not regulated.

EU CLP 2008 :

Classification : Not regulated.

Hazard statement codes : Not regulated.

Precautionary statement codes : Not regulated.

EU SVHC list : Not regulated.

EU Authorisation List : Not regulated.

EU Restriction List : Not regulated.

Foreign Regulatory Information

External information :

U.S.A management information (OSHA Regulation) : Not regulated.

U.S.A management information (CERCLA Regulation) : Not regulated.

U.S.A management information (EPCRA 302 Regulation) : Not regulated.

U.S.A management information (EPCRA 304 Regulation) : Not regulated.

U.S.A management information (EPCRA 313 Regulation) : Not regulated.

Korea management information : Not regulated.

Substance of Roterdame Protocol : Not regulated.

Substance of Stockholme Protocol : Not regulated.

Substance of Montreal Protocol : Not regulated.

15.2 Chemical safety assessment : No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16 : OTHER INFORMATION

Product safety data sheet for prepared in accordance with Regulation (EU) 453/2010 (REACH), Annex II

16.1 Indication of changes

Date Updated : 05th. April. 2017

Version : 5.0/EN

16.2 Abbreviations and acronyms

ACGIH = American Conference of Government Industrial Hygienists.

CLP = Classification Labelling Packaging Regulation ; Regulation (EC) No 1272/2008.

CAS No. = Chemical Abstracts Service number.

DMEL = Derived Minimal Effect Levels.

DNEL = Derived No Effect Level.

EC Number = EINECS and ELINCS Number (see also EINECS and ELINCS).

EU = European Union.

IARC = International Agency for Research on Cancer.

ISHL = Industrial Safety & Health Law.

NIOSH = National Institute for Occupational Safety & Health.

NTP = National Toxicology Program.

OSHA = European Agency for Safety and Health at work.

PBT = Persistent, Bioaccumulative and Toxic substance.

PNEC(s) = Predicted No Effect Concentration(s).

REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 453/2010.

STP = Sewage Treatment Plant.

SVHC = Substances of Very High Concern.

vPvB = very Persistent and very Bioaccumulative.

UN = United Nations.

MARPOL = International Convention for the Prevention of Pollution from Ships (IMO).

IBC = Intermediate Bulk Container.

CERCLA = Comprehensive Environmental Response, Compensation & Liability Act (US).

EPCRA = Emergency Planning and Community Right-to-Know Act (US).

EINECS = European Inventory of Existing Commercial chemical Substances.

ELINCS = European List of Notified Chemical Substances.

16.3 Key literature reference and sources for data :

16.4 Classification and procedure used to derive the classification for mixtures according to Regulation(EC)

1272/2008(CLP):

Classification according to Regulation (EC) 1272/2008

Classification procedure

16.5 Relevant R-phrases and/or H-statements (number and full text) :

Not available.

16.6 Training advice :

- Do not handle until all safety precautions have been read and understood.

16.7 Further information :

This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation, as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship. This version of the SDS supersedes all previous versions.