



Vitamin C60 BioResearch Corporation

MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCT & COMPANY IDENTIFICATION

[PRODUCT NAME]

Radical Sponge

[COMPANY IDENTIFICATION]

MANUFACTURER / SUPPLIER

Name: Vitamin C60 BioResearch Corporation

Address: TATSUNUMA TATEMONO Bldg. 9F

1-3-19 YAESU CHUO-KU, TOKYO 103-0028, JAPAN

Telephone: +81-3-3517-3253

Facsimile: +81-3-3517-3260

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Radical Sponge is the mixture of ingredients as follows.

CHEMICAL NAME [PROPORTION]:

1,3-BUTYLENE GLYCOL [75%]

PURIFIED WATER [>14.97%]

POLYVINYLPIRROLIDONE [10.0%]*

FULLERENE (fullereneC₆₀) [<0.03%]*

*i.e.[10% as POLYVINYLPIRROLIDONE C60/C70]

CHEMICAL FORMULA:

CAS. REGISTRY NUMBER: 1,3-BUTYLENE GLYCOL: 107-88-0

PURIFIED WATER: 7732-18-5

POLYVINYLPIRROLIDONE: 9003-39-8

FULLERENE C₆₀: 99685-96-8FULLERENE C₇₀: 115383-22-7

SECTION 3. HAZARDS INFORMATION

EMERGENCY OVERVIEW:

Caution! May cause respiratory tract, skin and eye irritation.

POTENTIAL HEALTH EFFECTS

EYES:	May cause irritation.
SKIN:	No relevant information found.
INGESTION:	No relevant information found.
INHALATION:	No relevant information found.
CARCINOGENIC:	No relevant information found.

SECTION 4. FIRST AID MEASURES

INHALATION:	Remove the victims from the contamination immediately to fresh air. Wash mouth with water. If inhaled in large amount, get medical attention.
INGESTION:	Wash mouth with water. Do not induce vomiting. If ingested in large amount, get medical attention.
SKIN CONTACT:	Immediately wash thoroughly with a mild unscented soap or cleansing cream and water. Get medical attention, if necessary.
EYE CONTACT:	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

NOTE TO PHYSICIAN: Treat symptomatically for lung or eye irritation, if present.

SECTION 5. FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT (°C):	Not applicable.
LOWER EXPLOSIVE LIMIT IN AIR (g/m ³):	Not applicable.
UPPER EXPLOSIVE LIMIT IN AIR (g/m ³):	Not applicable.
AUTOIGNITION TEMPERATURE:	No relevant information found.
HAZARDOUS COMBUSTION PRODUCTS:	Carbon monoxide and carbon dioxide.
FURTHER INFORMATION:	In the event of a fire, wear full protective clothing and self-contained breathing apparatus.

EXTINGUISHING MEDIA:

Carbon dioxide, alcohol resistant foam, or dry chemicals are recommended.

FIRE-FIGHTING PROCEDURES:

Fire fighting should be performed from upwind.

The movable containers should quickly be moved to a safe location.

Unauthorized personnel should be restricted from the area.

Cut off the source of fire and use appropriate fire extinguishing media to put out the fire.

Take appropriate measure not to harm the environment during fire fighting.

Initial fire fighting should be done using water, dry chemical powder, carbon dioxide, dry sand. For large fire, use fog water spray or alcohol resistant foam spray.

If surrounding area of container is on fire, remove container to the safety area.

If container cannot be removed, then put water in the container and cool off.

PERSONAL PROTECTION:

During fire fighting, be sure to wear appropriate respirator, rubber gloves and safety goggles.

Paying attention to avoid inhale smoke with carbon monoxide and carbon dioxide. According to situation, use appropriate respirator.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTION:

Respiratory protection: Use appropriate respirator

Hand protection: Rubber gloves are recommended

Eye protection: Safety goggles are recommended

ENVIRONMENTAL PRECAUTIONS:

Dispose of in landfill or incineration in accordance with national and local laws and regulations.

METHODS FOR CLEANING UP:

Absorb spills with sand, absorbent paper or similar and discard. Wash area down with excess water.

SECTION 7. HANDLING AND STORAGE

Use in a well-ventilated area. Keep containers closed when not in use. Always open containers slowly to avoid any excess pressure to vent.

HANDLING: Avoid breathing vapor. Avoid contact with skin, eyes or clothing. Wash exposed skin daily. Wash work clothes daily.

STORAGE: Keep away from sunlight in the case of out door storage. Prevent exposure to high temperatures, open flames, source of ignitions and oxidizers.

Store in a clean dry and cool dark area. Avoid long-term storage.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS: No relevant information found.

PERSONAL PROTECTION:

Respiratory protection: Use appropriate respirator.

Hand protection: Rubber gloves are recommended.

	Barrier cream application prior to skin exposure may assist in the removal of Radical Sponge from the skin.
Eye protection:	Safety goggles are recommended.
Skin protection:	Wash exposed skin for hygienic purposes with water and mild soap or waterless hand cream to remove Radical Sponge.
Protective clothing:	None required. Work clothing should be confined to the workplace.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

PHYSICAL

PHYSICAL FORM:	Syrupy liquid.
COLOR:	Dark brown.
ODOR:	Essentially odorless.
MELTING POINT:	No relevant information found.
BOILING POINT:	No relevant information found.
THERMAL DECOMPOSITION:	No relevant information found.
VAPOR PRESSURE:	No relevant information found.
DENSITY:	No relevant information found.
SOLUBILITY:	Soluble in water and alcohol.

SECTION 10. STABILITY & REACTIVITY

STABILITY & REACTIVITY:	Stable under normal handling and storage conditions.
CONDITIONS TO AVOID:	Contact with strong oxidizers; exceeding ignition; excessive heat or flame.
HAZARDOUS DECOMPOSITION PRODUCTS:	No relevant information found. Releases carbon monoxide and carbon dioxide when burning.
HAZARDOUS POLYMERIZATION:	No relevant information found.

SECTION 11. TOXICOLOGICAL INFORMATION

No significant health hazards when POLYVINYLPIRROLIDONE-C60/-C70* solution was used for designed purpose and application (*CAS RN: 229183-66-8).

ADJUVANT AND STRIP TEST:	(-) *1
PHOTOTOXICITY TEST:	(-) *1
ACUTE ORAL TOXICITY:	(-) *1
GENOTOXICITY TEST:	(-) *1
BACTERIAL REVERSEMUTATION:	(-) *1

PATCH TEST: (-) *1

SECTION 12. ECOLOGICAL INFORMATION

BIODEGRADABILITY: No relevant information found.
BIOACCUMULATION: No relevant information found.
ECOTOXICITY: No relevant information found.

SECTION 13. DISPOSAL CONSIDARATION

Dispose in accordance with the applicable national and local laws, and/or regulations.

SECTION 14. TRANSPORT INFORMATION

Not classed as hazardous for transport purpose.

SECTION 15. REGULATORY INFORMATION

No relevant information found.

SECTION 16. OTHER INFORMATION

*1 : The Company's own testing data Tested by Mitsubishi Chemical Safety Institute Ltd.

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