

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations (According to HCS-2012
APPENDIX D TO §1910.1200)
Issue date: 9/29/2021 Supersedes: 9/29/2021 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Substance
Trade name : C-ENERGY™ Actilion GHDR 15-4, ACTILION GHDR 10-4, ACTILION QX
Chemical name : Graphite
CAS-No. : 7782-42-5

1.2. Recommended use and restrictions on use

Recommended use : Used as electrical and thermal conductive additive, friction modifier, li-ion host material.
Restrictions on use : No information available

1.3. Supplier

Imerys Graphite & Carbon Switzerland Ltd.
Strada Industriale 12, 6743, Bodio (Switzerland)
6743
T +41-91873-2010 - F +41-91873-2019
graphiteandcarbon.ch@imerys.com

1.4. Emergency telephone number

Emergency number : For Hazardous Materials [or Dangerous Goods] Incident
Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300 (Toll Free)
+1-703-527-3887 (Local)
Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) : None
Signal word (GHS US) : None
Hazard statements (GHS US) : None
Precautionary statements (GHS US) : None

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable.

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SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%
Graphite	CAS-No.: 7782-42-5	> 99.5

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable.

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Wash skin with mild soap and water. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Never give anything by mouth to an unconscious person. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : No additional information available.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Dry chemical, carbon dioxide, water spray, alcohol resistant foam.
Unsuitable extinguishing media	: High volume water jet.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released, such as carbon monoxide, carbon dioxide.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate personnel to a safe area. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ensure adequate ventilation, especially in confined areas.

6.1.1. For non-emergency personnel

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Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Do not eat, drink or smoke during use. Wash thoroughly after handling.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Advise local authorities if considered necessary.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Evacuate unnecessary personnel. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take action to prevent static discharges. Use personal protective equipment as required.
Hygiene measures : Keep away from food, drink and animal feeding stuffs. Avoid contact with skin and eyes. Take off immediately all contaminated clothing and wash it before reuse. Avoid dust formation. Do not breathe dust. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep cool. Store in a well-ventilated place. Containers which are opened should be properly resealed and kept upright to prevent leakage. Keep only in original container.
Incompatible materials : Fluorine, chlorine trifluoride.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Graphite (7782-42-5)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	2 mg/m ³ (all forms except graphite fibers-respirable particulate matter)
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA [1]	15 mg/m ³ (synthetic-total dust) 5 mg/m ³ (synthetic-respirable fraction)
USA - IDLH - Occupational Exposure Limits	
IDLH	1250 mg/m ³
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL TWA	2.5 mg/m ³ (natural-respirable dust)

8.2. Appropriate engineering controls

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Appropriate engineering controls : Remove all sources of ignition. Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves (EN 374).

Eye protection:

Safety glasses with side shields (EN 166).

Skin and body protection:

Use chemically protective clothing.

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment.
Respirator: FFP2 (EN 149).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Colour	: Grey to black
Odour	: Odourless
Odour threshold	: No data available
pH	: No data available
Melting point	: > 3338 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 2.09 - 2.23 g/cm ³
Solubility	: < 0.001 g/L
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: > 580 °C
Decomposition temperature	: 3652 °C
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: Not applicable.
Explosive properties	: Not explosive.
Oxidising properties	: Non oxidizing.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

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The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Fluorine, chlorine trifluoride.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Graphite (7782-42-5)

LD50 oral rat	> 2000 mg/kg (OECD 423, CSR)
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LC50 Inhalation - Rat	> 2000 mg/L (OECD 403, CSR)
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Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Likely routes of exposure : Ingestion. Skin contact. Eye contact. Inhalation.
Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : None under normal conditions.
Symptoms/effects after eye contact : None under normal conditions.
Symptoms/effects after ingestion : None under normal conditions.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Graphite (7782-42-5)

LC50 - Fish [1]	> 100 mg/L/96 h (Danio rerio, OECD 203, CSR)
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EC50 - Crustacea [1]	> 100 mg/L/48 h (Daphnia magna, OECD 202, CSR)
EC50 - Algae [1]	> 100 mg/L/72 h (Pseudokirchneriella subcapitata, OECD 201, CSR)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not applicable.
Proper Shipping Name (TDG) : Not applicable.
Proper Shipping Name (IMDG) : Not applicable.
Proper Shipping Name (IATA) : Not applicable.

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : Not applicable.

TDG
Transport hazard class(es) (TDG) : Not applicable.

IMDG
Transport hazard class(es) (IMDG) : Not applicable.

IATA
Transport hazard class(es) (IATA) : Not applicable.

14.4. Packing group

Packing group (DOT) : Not applicable.

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Packing group (TDG) : Not applicable.
Packing group (IMDG) : Not applicable.
Packing group (IATA) : Not applicable.

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

No data available

TDG

No data available

IMDG

No data available

IATA

No data available

14.7. 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

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Graphite	7782-42-5	Present	Active	

15.2. International regulations

CANADA

Graphite (7782-42-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Graphite (7782-42-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Graphite (7782-42-5)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

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No additional information available

SECTION 16: Other information

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Issue date : 09/29/2021
Revision date : 09/29/2021
Data sources : ECHA. Loli.
Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.
Other information : No information available.

Abbreviations and acronyms	
SDS	Safety Data Sheet
LC50	Median lethal concentration
LD50	Median lethal dose
EC50	Median effective concentration
IMDG	International Maritime Dangerous Goods
IATA	International Air Transport Association
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail

Safety Data Sheet (SDS), USA

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.