



PRODUCT INFORMATION SHEET

MATERION

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

1.1. Product identifier

Name of the substance Carbon
Identification number 7440-44-0 (CAS number)
Synonyms None.
Document number 324
Issue date 01-June-2015
Version number 01

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

Identified uses Not available.
Uses advised against None known.

1.3. Details of the supplier of the product information sheet

Supplier

Company name Materion Advanced Materials Group
Address 42 Mt. Ebo Road South
Brewster, NY 10509
United States
Division
Telephone Supplier Phone 1+845.279.0900
e-mail Not available.
Contact person Not available.

1.4. Emergency telephone number Chemtrec 1+703.527.3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards

Self-heating substances and mixtures Category 2

H252 - Self-heating in large quantities; may catch fire.

Hazard summary

Physical hazards Not classified for physical hazards.
Health hazards Not classified for health hazards.
Environmental hazards Not classified for hazards to the environment.
Specific hazards Not available.
Main symptoms Not available.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Carbon
Hazard pictograms None.
Signal word Warning
Hazard statements
H252 Self-heating in large quantities; may catch fire.

Precautionary statements

Prevention
P235 + P410 Keep cool. Protect from sunlight.
P280 Wear protective gloves/eye protection/face protection.
Response Not available.
Storage

P407 Maintain air gap between stacks/pallets.
P420 Store away from other materials.

Disposal Not available.

Supplemental label information None.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Carbon	100 - 100	7440-44-0 231-153-3	-	-	
Classification:	DSD: -				
	CLP: Self-heat. 2;H252				

SECTION 4: First aid measures

General information Not available.

4.1. Description of first aid measures

Inhalation Not available.

Skin contact Not available.

Eye contact Not available.

Ingestion Not available.

4.2. Most important symptoms and effects, both acute and delayed Not available.

4.3. Indication of any immediate medical attention and special treatment needed Not available.

SECTION 5: Firefighting measures

General fire hazards Not available.

5.1. Extinguishing media

Suitable extinguishing media Not available.

Unsuitable extinguishing media Not available.

5.2. Special hazards arising from the substance or mixture Not available.

5.3. Advice for firefighters

Special protective equipment for firefighters Not available.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Not available.

For emergency responders Not available.

6.2. Environmental precautions Not available.

6.3. Methods and material for containment and cleaning up Not available.

6.4. Reference to other sections Not available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Not available.

7.2. Conditions for safe storage, including any incompatibilities Not available.

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Material	Type	Value	Form
Carbon	MAK	5 mg/m ³	Respirable dust.
	STEL	10 mg/m ³	Respirable dust.
Components	Type	Value	Form
Carbon (CAS 7440-44-0)	MAK	5 mg/m ³	Respirable dust.
	STEL	10 mg/m ³	Respirable dust.

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Material	Type	Value	Form
Carbon	TWA	3,5 mg/m ³	Respirable fraction.
Components	Type	Value	Form
Carbon (CAS 7440-44-0)	TWA	3,5 mg/m ³	Respirable fraction.

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Material	Type	Value	Form
Carbon	MAC	4 mg/m ³	Respirable dust.
		10 mg/m ³	Total dust.
Components	Type	Value	Form
Carbon (CAS 7440-44-0)	MAC	4 mg/m ³	Respirable dust.
		10 mg/m ³	Total dust.

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Material	Type	Value
Carbon	TWA	10 mg/m ³
Components	Type	Value
Carbon (CAS 7440-44-0)	TWA	10 mg/m ³

Denmark. Exposure Limit Values

Material	Type	Value	Form
Carbon	TLV	2,5 mg/m ³	Respirable.
Components	Type	Value	Form
Carbon (CAS 7440-44-0)	TLV	2,5 mg/m ³	Respirable.

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Material	Type	Value	Form
Carbon	TWA	3 mg/m ³	Dust.
Components	Type	Value	Form
Carbon (CAS 7440-44-0)	TWA	3 mg/m ³	Dust.

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Material	Type	Value	Form
Carbon	VME	5 mg/m ³	Respirable fraction.
		2 mg/m ³	Respirable fraction.
		10 mg/m ³	Inhalable fraction.
Components	Type	Value	Form
Carbon (CAS 7440-44-0)	VME	5 mg/m ³	Respirable fraction.

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value	Form
		2 mg/m ³ 10 mg/m ³	Respirable fraction. Inhalable fraction.

Greece. OELs (Decree No. 90/1999, as amended)

Material	Type	Value	Form
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Carbon	TWA	5 mg/m ³ 10 mg/m ³	Respirable. Inhalable
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Components	Type	Value	Form
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Carbon (CAS 7440-44-0)	TWA	5 mg/m ³ 10 mg/m ³	Respirable. Inhalable
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Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Material	Type	Value	Form
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Carbon	TWA	6 mg/m ³ 10 mg/m ³	Respirable dust. Total inhalable dust.
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Components	Type	Value	Form
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Carbon (CAS 7440-44-0)	TWA	6 mg/m ³ 10 mg/m ³	Respirable dust. Total inhalable dust.
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Ireland. Occupational Exposure Limits

Material	Type	Value	Form
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Carbon	TWA	4 mg/m ³ 10 mg/m ³	Respirable dust. Total inhalable dust.
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Components	Type	Value	Form
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Carbon (CAS 7440-44-0)	TWA	4 mg/m ³ 10 mg/m ³	Respirable dust. Total inhalable dust.
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Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

Material	Type	Value	Form
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Carbon	TWA	4 mg/m ³ 1 mg/m ³	Inhalable fraction. Respirable fraction.
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Components	Type	Value	Form
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Carbon (CAS 7440-44-0)	TWA	4 mg/m ³ 1 mg/m ³	Inhalable fraction. Respirable fraction.
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Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Material	Type	Value	Form
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Carbon	TWA	2 mg/m ³	Respirable fraction.
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Components	Type	Value	Form
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Carbon (CAS 7440-44-0)	TWA	2 mg/m ³	Respirable fraction.
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Sweden. Occupational Exposure Limit Values

Material	Type	Value
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Carbon	TWA	0,2 fibers/mL
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Components	Type	Value
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Carbon (CAS 7440-44-0)	TWA	0,2 fibers/mL
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Material	Type	Value	Form
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Carbon	TWA	4 mg/m ³ 10 mg/m ³	Respirable dust. Inhalable dust.
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Components	Type	Value	Form
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Carbon (CAS 7440-44-0)	TWA	4 mg/m ³ 10 mg/m ³	Respirable dust. Inhalable dust.
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Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Not available.

Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Not available.

Individual protection measures, such as personal protective equipment

General information Not available.

Eye/face protection Not available.

Skin protection

- **Hand protection** Not available.

- **Other** Not available.

Respiratory protection Not available.

Thermal hazards Not available.

Hygiene measures Not available.

Environmental exposure controls Not available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Solid.

Form Not available.

Colour Not available.

Odour Not applicable.

Odour threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range 4492 °C (8117,6 °F) 101,325 kPa

3642 °C (6587,6 °F)

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapour pressure 62128,05 kPa at 25 °C

Vapour density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Insoluble

Solubility (other) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature 452 °C (845,6 °F)

Decomposition temperature Not available.

Viscosity Not available.

Explosive properties Not available.

Oxidizing properties Not available.

9.2. Other information

Heat of combustion (NFPA 30B) 0 kJ/g

Molecular formula C

Molecular weight 12,01 g/mol

SECTION 10: Stability and reactivity

10.1. Reactivity	Not available.
10.2. Chemical stability	Not available.
10.3. Possibility of hazardous reactions	Not available.
10.4. Conditions to avoid	Not available.
10.5. Incompatible materials	Not available.
10.6. Hazardous decomposition products	Not available.

SECTION 11: Toxicological information

General information Not available.

Information on likely routes of exposure

Inhalation Not available.

Skin contact Not available.

Eye contact Not available.

Ingestion Not available.

Symptoms Not available.

11.1. Information on toxicological effects

Product	Species	Test results
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Carbon

Acute

Oral

LD50	Rat	> 10000 mg/kg
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Components	Species	Test results
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Carbon (CAS 7440-44-0)

Acute

Oral

LD50	Rat	> 10000 mg/kg
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Skin corrosion/irritation Not available.

Serious eye damage/eye irritation Not available.

Respiratory sensitisation Not available.

Skin sensitisation Not available.

Germ cell mutagenicity Not available.

Carcinogenicity Not available.

Reproductive toxicity Not available.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Not available.

Aspiration hazard Not available.

Mixture versus substance information Not available.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity No toxicity data noted for the ingredient(s).

12.2. Persistence and degradability Not available.

12.3. Bioaccumulative potential Not available.

Partition coefficient n-octanol/water (log Kow) Not available.

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil	Not available.
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects	Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Not available.
Contaminated packaging	Not available.
EU waste code	Not available.

SECTION 14: Transport information

ADR

14.1. UN number	UN1362
14.2. UN proper shipping name	CARBON, ACTIVATED
14.3. Transport hazard class(es)	
Class	4.2
Subsidiary risk	-
Label(s)	4.2
Hazard No. (ADR)	40
Tunnel restriction code	E
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

RID

14.1. UN number	UN1362
14.2. UN proper shipping name	CARBON, ACTIVATED
14.3. Transport hazard class(es)	
Class	4.2
Subsidiary risk	-
Label(s)	4.2
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

ADN

14.1. UN number	UN1362
14.2. UN proper shipping name	Carbon, Activated
14.3. Transport hazard class(es)	
Class	4.2
Subsidiary risk	-
Label(s)	4.2
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

IATA

14.1. UN number	UN1362
14.2. UN proper shipping name	Carbon, activated
14.3. Transport hazard class(es)	
Class	4.2
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	No.

ERG Code	4L
14.6. Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

14.1. UN number	UN1362
14.2. UN proper shipping name	CARBON, ACTIVATED
14.3. Transport hazard class(es)	
Class	4.2
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-J
14.6. Special precautions for user	Not available.

ADN; ADR; IATA; IMDG; RID



SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I, as amended
Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II, as amended
Not listed.

Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V
Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended
Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended
Not listed.

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use

Not regulated.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended

Not listed.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances

Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended

Not listed.

Directive 94/33/EC on the protection of young people at work, as amended

Not listed.

National regulations Not available.

15.2. Chemical safety assessment Not available.

SECTION 16: Other information

List of abbreviations Not available.

References Not available.

Information on evaluation method leading to the classification of mixture Not available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15 H252 Self-heating in large quantities; may catch fire.

Revision information None.

Training information Not available.