Safety Data Sheet

29 CFR 1910.1200 App D

HC Expanders

Version number: 1.0

SECTION 1: Identification

1.1 Product identifier

Trade name **HC Expanders**

CAS number not relevant (mixture)

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

Relevant identified uses

Industrial use
Professional use
Additive for:
For the production of:
Batteries

Uses advised against Do not use for private purposes (household)

1.3 Details of the supplier of the safety data sheet

Hammond Expanders
3100 Michigan St
Hammond, Indiana IN 46323

Telephone: +1 219.931.9360
e-mail: customerservice@hmndgroup.com

1.4 Emergency telephone number

As above or next toxicological information centre.

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Classification

Section	Hazard class	Category	Hazard class and category	Hazard state-ment
A.6	carcinogenicity	2	Carc. 2	H351
B.cD	combustible dust	Comb. Dust	cD	OSHA003

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Signal word Warning

Pictograms

GHS08

Hazard statements

H351	Suspected of causing cancer.
OSHA003	May form combustible dust concentrations in air.

Precautionary statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	If exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazardous ingredients for labelling carbon black

2.3 Other hazards

Dust explosion hazards.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

Hazardous ingredients

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
carbon black	CAS No 1333-86-4	20 – 65	Carc. 2 / H351 cD / OSHA003		IARC: 2B

Notes

IARC 2B: IARC group 2B: possibly carcinogenic to humans (International Agency for Research on Cancer)

The specific exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: First-aid measures

4.1 Description of first- aid measures

General notes

Self-protection of the first aider.
Take off immediately all contaminated clothing.
IF exposed or concerned: Get medical advice/attention.

Following inhalation

Provide fresh air.
If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.
Get medical advice/attention.

Following eye contact

Rinse cautiously with water for several minutes.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion

Rinse mouth. Do not induce vomiting.
Get medical advice/attention.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

These information are not available.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

water, foam, alcohol resistant foam, fire extinguishing powder

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.
Danger of dust explosion.
Deposited combustible dust has considerable explosion potential.

Hazardous combustion products

carbon monoxide (CO), carbon dioxide (CO2), sulfur oxides (SOx)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Coordinate firefighting measures to the fire surroundings.
Do not allow firefighting water to enter drains or water courses.
Collect contaminated firefighting water separately.
Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

chemical protection suit, self-contained breathing apparatus (SCBA)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.
Ventilate affected area.
Control of dust.
Avoidance of ignition sources.
Do not breathe dust.
Do not get in eyes, on skin, or on clothing.
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.
Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Take up mechanically.

Advice on how to clean up a spill

Take up mechanically.
Collect spillage.

Other information relating to spills and releases

Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.
Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.
Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharge.
Removal of dust deposits.
Only vacuum cleaners containing no ignition sources may be used for combustible dusts.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.

Specific notes/details

Layers, deposits and heaps of combustible dust must be considered, like any other source which can form a hazardous explosive atmosphere.
Dust deposits may accumulate on all deposition surfaces in a technical room.
Danger of dust explosion.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.
Remove contaminated clothing and protective equipment before entering eating areas.
Do not breathe dust.
Do not get in eyes, on skin, or on clothing.
Wash thoroughly after handling.
Preventive skin protection (barrier creams/ointments) is recommended.

7.2 Conditions for safe storage, including any incompatibilities

Explosive atmospheres

Removal of dust deposits.
Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

Flammability hazards

Keep away from sources of ignition - No smoking.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharge.
Ground/bond container and receiving equipment.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

heat, humidity

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.
Store in a well-ventilated place. Keep cool.
Keep container tightly closed.

Ventilation requirements

Provision of sufficient ventilation.

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Notation	Source
US	Particulates not otherwise regulated		PEL (CA)		10			dust	Cal/OSHA PEL
US	Particulates not otherwise regulated		PEL (CA)		5			r	Cal/OSHA PEL
US	particulates not otherwise classified		REL					appx-D	NIOSH REL
US	particulates not otherwise classified (PNOC)		PEL	1,766	15			i, dust	29 CFR 1910.1000
US	particulates not otherwise classified (PNOC)		PEL	529.5	5			partml, r, dust	29 CFR 1910.1000
US	Carbon black in presence of polycyclic aromatic hydrocarbons (PAHs)	1333-86-4	REL		0.1 (10 h)			PAHs, appx-A, appx-C	NIOSH REL
US	carbon black	1333-86-4	PEL (CA)		3.5				Cal/OSHA PEL

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Notation	Source
US	carbon black	1333-86-4	PEL		3.5				29 CFR 1910.1000
US	carbon black	1333-86-4	REL		3.5 (10 h)			appx-A, appx-C	NIOSH REL
US	barium sulfate	7727-43-7	REL		10 (10 h)				NIOSH REL
US	barium sulfate	7727-43-7	PEL		15			i, dust	29 CFR 1910.1000
US	barium sulfate	7727-43-7	REL		5 (10 h)			r	NIOSH REL
US	barium sulfate	7727-43-7	PEL		5			r, dust	29 CFR 1910.1000

Notation

appx-A	NIOSH Potential Occupational Carcinogen (Appendix A)
appx-C	Appendix C - Supplementary Exposure Limits
appx-D	see Appendix D - Substances with No Established RELs
dust	as dust
i	inhalable fraction
PAHs	as polycyclic aromatic hydrocarbons (PAHs)
partml	particles/ml
r	respirable fraction
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified

Relevant DNELs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
carbon black	1333-86-4	DNEL	1 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
carbon black	1333-86-4	DNEL	0.5 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
carbon black	1333-86-4	DNEL	0.06 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects

Relevant PNECs of components of the mixture				
Name of substance	**CAS No**	**Endpoint**	**Threshold level**	**Environmental compartment**
carbon black	1333-86-4	PNEC	1 $^{mg}/_{l}$	freshwater
carbon black	1333-86-4	PNEC	0.1 $^{mg}/_{l}$	marine water

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

Protective gloves		
Material	**Material thickness**	**Breakthrough times of the glove material**
plastic and rubber	no information available	no information available

Wear suitable gloves.
Chemical protection gloves are suitable, which are tested according to EN 374.
Check leak-tightness/impermeability prior to use.
In the case of wanting to use the gloves again, clean them before taking off and air them well.
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Other protection measures

Protective clothing for use against solid particulates.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.
Particulate filter device (EN 143).

Environmental exposure controls

Use appropriate container to avoid environmental contamination.
Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	Solid
Form	Powder
Color	Black
Odor	Characteristic
Odor threshold	These information are not available

Other safety parameters

pH (value)	These information are not available
Melting point/freezing point	These information are not available
Initial boiling point and boiling range	These information are not available
Flash point	Not applicable
Evaporation rate	These information are not available
Flammability (solid, gas)	This material is combustible, but will not ignite readily
Explosion limits of dust clouds	Not determined
Vapor pressure	These information are not available
Density	These information are not available
Vapor density	These information are not available
Relative density	These information are not available

Solubility(ies)

Water solubility	Insoluble

Partition coefficient

n-octanol/water (log KOW)	These information are not available
Auto-ignition temperature	Not relevant (Solid matter)
Decomposition temperature	These information are not available

Viscosity

Kinematic viscosity	Not relevant (Solid matter)
Dynamic viscosity	Not relevant (Solid matter)

Explosive properties	Dust explosion hazards
Oxidizing properties	Shall not be classified as oxidizing

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

Danger of dust explosion.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharge.

10.5 Incompatible materials

acids, bases, oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.
Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure

If not otherwise specified the classification is based on:
Ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species	Method
carbon black	1333-86-4	oral	LD50	>10,000 $^{mg}/_{kg}$	rat	OECD Guideline 401
carbon black	1333-86-4	dermal	LD50	>3,000 $^{mg}/_{kg}$	rabbit	

Skin corrosion/irritation

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Serious eye damage/eye irritation

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory or skin sensitization

Skin sensitization
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitization
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity

Suspected of causing cancer.

IARC Monographs

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	CAS No	Classification	Number
carbon black	1333-86-4	2B	

Legend

2B	Possibly carcinogenic to humans

National Toxicology Program (United States)

None of the ingredients are listed.

OSHA Carcinogens

None of the ingredients are listed.

Reproductive toxicity

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Test data are not available for the complete mixture.

Aquatic toxicity (acute) of components of the mixture

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Method	Exposure time
carbon black	1333-86-4	ErC50	>10,000 mg/l	algae (Desmodesmus subspicatus)	OECD Guideline 201	72 h
carbon black	1333-86-4	EC50	>10,000 mg/l	algae (Desmodesmus subspicatus)	OECD Guideline 201	72 h
carbon black	1333-86-4	EC50	>5,600 mg/l	daphnia magna	OECD Guideline 202	24 h

Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

Aquatic toxicity (chronic) of components of the mixture

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Method	Exposure time
carbon black	1333-86-4	NOEC	>10,000 mg/l	algae (Desmodesmus subspicatus)	OECD Guideline 201	72 h
carbon black	1333-86-4	growth (EbCx) 10%	>10,000 mg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	72 h
carbon black	1333-86-4	growth rate (ErCx) 10%	>10,000 mg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	72 h

12.2 Persistence and degradability

Biodegradation

Data are not available.

Persistence

Data are not available.

12.3 Bioaccumulative potential

Test data are not available for the complete mixture.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects

Data are not available.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): 1

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packages

Completely emptied packages can be recycled.
Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1	**UN number**	Not subject to transport regulations
14.2	**UN proper shipping name**	-
14.3	**Transport hazard class(es)**	-
14.4	**Packing group**	-
14.5	**Environmental hazards**	-
14.6	**Special precautions for user**	-
14.7	**Transport in bulk according to Annex II of MARPOL and the IBC Code**	-

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT)

Not subject to transport regulations.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA) All ingredients are listed

Superfund Amendment and Reauthorization Act (SARA TITLE III)

The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

Specific Toxic Chemical Listings (EPCRA Section 313)

none of the ingredients are listed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

none of the ingredients are listed

Clean Air Act

none of the ingredients are listed

Right to Know Hazardous Substance List

Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
carbon black	1333-86-4		CA.

Legend

CA Carcinogenic

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

Proposition 65 List of chemicals

Name acc. to inventory	CAS No	Remarks	Type of the toxicity
carbon black	1333-86-4	airborne, unbound particles of respirable size	cancer

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System.
American Coatings Association.

Category	Rating	Description
Chronic	*	chronic (long-term) health effects may result from repeated overexposure
Health	0	no significant risk to health
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information, including date of preparation or last revision

Date of preparation: 2020-06-15

Abbreviations and acronyms

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
cD	Combustible dust
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IARC	International Agency for Research on Cancer
IARC Monographs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NOEC	No Observed Effect Concentration
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
STEL	Short-term exposure limit
TWA	Time-weighted average

Abbreviations and acronyms	
Abbr.	**Descriptions of used abbreviations**
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT).
International Maritime Dangerous Goods Code (IMDG).
Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties.
Health hazards.
Environmental hazards.
The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

List of relevant phrases (code and full text as stated in chapter 2 and 3)	
Code	**Text**
H351	Suspected of causing cancer.
OSHA003	May form combustible dust concentrations in air.

Responsible for the safety data sheet

Chemical Regulatory Compliance Company
Chicago, IL
USA

Telephone: +1 (630) 410-1660
e-Mail: GHS@crc-us.com
Website: www.crc-us.com

Disclaimer

This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.