



Plexitrac Binder Black - 8401

ICP Construction Inc.

Version No: 8.8

Safety Data Sheet according to OSHA HazCom Standard (2024) requirements

Initial Date: 03/08/2017

Revision Date: 07/14/2026

Print Date: 07/14/2026

L.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	Plexitrac Binder Black - 8401
Synonyms	Not Available
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses	Binder for building running tracks and other athletic surfaces
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Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	ICP Construction Inc.
Address	150 Dascomb Road Andover, MA 01810 United States
Telephone	1-866-667-5119 1-978-623-9987
Fax	Not Available
Website	www.icpgroup.com
Email	sds@icpgroup.com

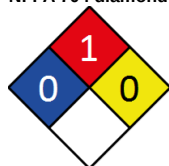
Emergency phone number

Association / Organisation	ChemTel
Emergency telephone number(s)	1-800-255-3924
Other emergency telephone number(s)	1-813-248-0585

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health, Red = Fire, Yellow = Reactivity and White = Special (Oxidizer or water reactive substances)

Classification	Carcinogenicity Category 2, Specific Target Organ Toxicity - Repeated Exposure Category 2
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Label elements

Hazard pictogram(s)	
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Signal word	Warning
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Hazard statement(s)

H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) General

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P260	Do not breathe mist/vapours/spray.
P280	Wear protective gloves and protective clothing.
P202	Do not handle until all safety precautions have been read and understood.

Precautionary statement(s) Response

P308+P313	IF exposed or concerned: Get medical advice/ attention.
P314	Get medical advice/attention if you feel unwell.

Precautionary statement(s) Storage

P405	Store locked up.
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Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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No further product hazard information.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
1333-86-4	0.1-1	carbon black
107-21-1	1.566	ethylene glycol
111-46-6	0.087	diethylene glycol
123-91-1	0.001738	1,4-dioxane
75-07-0	0.001738	acetaldehyde

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 First-aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with eyes: ▶ Wash out immediately with water. ▶ If irritation continues, seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary.
Ingestion	▶ Immediately give a glass of water. ▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Fire-fighting measures

Extinguishing media

- ▶ Foam.
- ▶ Dry chemical powder.

Special hazards arising from the substrate or mixture

Fire Incompatibility	▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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Special protective equipment and precautions for fire-fighters

Fire Fighting	- Alert Fire Brigade and tell them location and nature of hazard. - Wear full body protective clothing with breathing apparatus.
Fire/Explosion Hazard	- Combustible. - Slight fire hazard when exposed to heat or flame. Combustion products include: - carbon dioxide (CO2) - other pyrolysis products typical of burning organic material. May emit poisonous fumes.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	- Remove all ignition sources. - Clean up all spills immediately.
Major Spills	Moderate hazard. Clear area of personnel and move upwind.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	- Avoid skin contact, including inhalation. - Wear protective clothing when risk of exposure occurs.
Other information	- Store in original containers. - Keep containers securely sealed.

Conditions for safe storage, including any incompatibilities

Suitable container	- Metal can or drum - Packaging as recommended by manufacturer. - Check all containers are clearly labelled and free from leaks.
Storage incompatibility	Acetic acid: - vapours forms explosive mixtures with air (above 39 C.) - reacts violently with bases such as carbonates and hydroxides (giving off large quantities of heat), oxidisers, organic amines, acetaldehyde, potassium tert-butoxide - reacts (sometimes violently), with strong acids, aliphatic amines, alkanolamines, alkylene oxides, epichlorohydrin, acetic anhydride, 2-aminoethanol, ammonia, ammonium nitrate, bromine pentafluoride, chlorosulfonic acid, chromic acid, chromium trioxide, ethylenediamine, ethyleneimine, hydrogen peroxide, isocyanates, oleum, perchloric acid, permanganates, phosphorus isocyanate, phosphorus trichloride, sodium peroxide, xylene - attacks cast iron, stainless steel and other metals, forming flammable hydrogen gas - attacks many forms of rubber, plastics and coatings - Avoid reaction with oxidising agents



X — Must not be stored together
O — May be stored together with specific preventions
+ — May be stored together

Note: Depending on other risk factors, compatibility assessment based on the table above may not be relevant to storage situations, particularly where large volumes of dangerous goods are stored and handled. Reference should be made to the Safety Data Sheets for each substance or article and risks assessed accordingly.

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Limits (PELs) Table Z-1	carbon black	Carbon black	3.5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	carbon black	Inert or Nuisance Dust: Total Dust	15 mg/m3 / 50 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	carbon black	Inert or Nuisance Dust: Respirable fraction	5 mg/m3 / 15 mppcf	Not Available	Not Available	Not Available

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Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US NIOSH Recommended Exposure Limits (RELs)	carbon black	Carbon black	3.5 mg/m3	Not Available	Not Available	Ca; TWA 0.1 mg PAHs/m3 [Carbon black in presence of polycyclic aromatic hydrocarbons (PAHs)]; See Appendix A - NIOSH Potential Occupational Carcinogens; See Appendix C - Supplementary Exposure Limits
US NIOSH Recommended Exposure Limits (RELs)	ethylene glycol	Ethylene glycol	Not Available	Not Available	Not Available	See Appendix D - Substances with No Established RELs
US OSHA Permissible Exposure Limits (PELs) Table Z-1	1,4-dioxane	Dioxane (Diethylene dioxide)	100 ppm / 360 mg/m3	Not Available	Not Available	Skin designation
US NIOSH Recommended Exposure Limits (RELs)	1,4-dioxane	Dioxane	Not Available	Not Available	1 (30-minute) ppm / 3.6 (30-minute) mg/m3	Ca; See Appendix A - NIOSH Potential Occupational Carcinogens
US OSHA Permissible Exposure Limits (PELs) Table Z-1	acetaldehyde	Acetaldehyde	200 ppm / 360 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	acetaldehyde	Acetaldehyde	Not Available	Not Available	Not Available	Ca; See Appendix A - NIOSH Potential Occupational Carcinogens; See Appendix C - Supplementary Exposure Limits (Aldehydes)

Emergency Limits			
Ingredient	TEEL-1	TEEL-2	TEEL-3
carbon black	9 mg/m3	99 mg/m3	590 mg/m3
ethylene glycol	30 ppm	150 ppm	900 ppm
diethylene glycol	6.9 ppm	140 ppm	860 ppm
1,4-dioxane	Not Available	Not Available	Not Available
acetaldehyde	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
carbon black	1,750 mg/m3	Not Available
ethylene glycol	Not Available	Not Available
diethylene glycol	Not Available	Not Available
1,4-dioxane	500 ppm	Not Available
acetaldehyde	2,000 ppm	Not Available

MATERIAL DATA

These exposure guidelines have been derived from a screening level of risk assessment and should not be construed as unequivocally safe limits. ORGS represent an 8-hour time-weighted average unless specified otherwise.

Exposed individuals are **NOT** reasonably expected to be warned, by smell, that the Exposure Standard is being exceeded.

Odour Safety Factor (OSF) is determined to fall into either Class C, D or E.

For 1,4-dioxane:
NIOSH Ceiling for dioxane: 1 ppm (30 minutes) - Potential Occupational Carcinogen
Odour Threshold Value: 0.80-172 ppm (detection), 1.8-278 ppm (recognition)
Because findings of both liver and lung tumours occur at high dietary levels of dioxane (approximately 10000 ppm) and are not seen at inhalation exposures slightly above 100 ppm for 2 years, dioxane is classed by ACGIH as an animal carcinogen of such low potential as to be of little significance as an occupational carcinogen at the recommended TLV-TWA. This is not the view of NIOSH who recommends a 1 ppm ceiling with the belief that the derivation of a safe exposure limit is not now available.

for ethylene glycol:
Odour Threshold: 25 ppm
NOTE: Detector tubes for ethylene glycol, measuring in excess of 10 mg/m3, are commercially available.
It appears impractical to establish separate TLVs for ethylene glycol vapour and mists.
Odour Threshold Value for acetaldehyde: 0.067 ppm (detection)
NOTE: Detection tubes for acetaldehyde, measuring in excess of 5 ppm, are commercially available.
Exposure at or below the recommended TLV is thought to prevent excessive eye irritation and potential injury to the respiratory tract.

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
Individual protection measures, such as personal protective equipment	
Eye and face protection	▶ Safety glasses with side shields ▶ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.
Skin protection	See Hand protection below
Hands/feet protection	The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. ▶ Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber

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Body protection	See Other protection below
Other protection	▶ Overalls. ▶ P.V.C apron.

Respiratory protection

Type BKAX-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- ▶ Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- ▶ The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- ▶ Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties**Information on basic physical and chemical properties**

Appearance	Text		
Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	>130	Taste	Not Available
Evaporation rate	Not Available BuAC = 1	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	130
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available
Nanoform Solubility	Not Available	Nanoform Particle Characteristics	Not Available
Particle Size	Not Available		

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information**Information on toxicological effects**

a) Acute Toxicity	Based on available data, the classification criteria are not met.
b) Skin Irritation/Corrosion	Based on available data, the classification criteria are not met.
c) Serious Eye Damage/Irritation	Based on available data, the classification criteria are not met.
d) Respiratory or Skin sensitisation	Based on available data, the classification criteria are not met.
e) Mutagenicity	Based on available data, the classification criteria are not met.
f) Carcinogenicity	There is sufficient evidence to classify this material as carcinogenic
g) Reproductivity	Based on available data, the classification criteria are not met.
h) STOT - Single Exposure	Based on available data, the classification criteria are not met.

Continued...

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i) STOT - Repeated Exposure	There is sufficient evidence to classify this material as toxic to specific organs through repeated exposure
j) Aspiration Hazard	Based on available data, the classification criteria are not met.
Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion	The material has NOT been classified by EC Directives or other classification systems as 'harmful by ingestion'. This is because of the lack of corroborating animal or human evidence.
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic	Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. On the basis, primarily, of animal experiments, concern has been expressed that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.

Plexitrac Binder Black - 8401	TOXICITY	IRRITATION
	Not Available	Not Available
carbon black	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
	Oral (Rat) LD50: >2000 mg/kg ^[1]	Skin: no adverse effect observed (not irritating) ^[1]
ethylene glycol	TOXICITY	IRRITATION
	dermal (mouse) LD50: >3500 mg/kg ^[1]	Eye (Rodent - rabbit): 0.012ppm/3D
	Oral (Rat) LD50: >2000 mg/kg ^[2]	Eye (Rodent - rabbit): 100mg/1H - Mild
		Eye (Rodent - rabbit): 1440mg/6H - Moderate
		Eye (Rodent - rabbit): 500mg/24H - Mild
		Eye (Rodent - rat): 0.012%/3D
		Eye: no adverse effect observed (not irritating) ^[1]
		Skin (Rodent - rabbit): 555mg - Mild
diethylene glycol	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 11890 mg/kg ^[2]	Eye (Rodent - rabbit): 50mg - Mild
	Inhalation (Rat) LC50: >4.6 mg/l4h ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
	Oral (Rat) LD50: 12565 mg/kg ^[2]	Skin (Human): 112mg/3D - Mild
		Skin (Rodent - rabbit): 500mg - Mild
1,4-dioxane	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 7600 mg/kg ^[2]	Eye (Human): 300ppm/15M
	Inhalation (Rat) LC50: 48.5-54.3 mg/l4h ^[2]	Eye (Rodent - guinea pig): 10ug - Moderate
	Oral (Rat) LD50: 4200 mg/kg ^[2]	Eye (Rodent - rabbit): 100mg - Severe
		Eye (Rodent - rabbit): 100mg/24H - Moderate
		Eye: adverse effect observed (irritating) ^[1]
		Skin (Rodent - rabbit): 515mg - Mild
		Skin: adverse effect observed (irritating) ^[1]
acetaldehyde	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 3540 mg/kg ^[2]	Eye (Human): 50ppm/15M
	Inhalation (Mouse) LC50: 23 mg/L4h ^[2]	Eye (Rodent - rabbit): 40mg - Severe
	Oral (Rat) LD50: 661 mg/kg ^[2]	Eye: adverse effect observed (irritating) ^[1]
		Skin (Rodent - rabbit): 500mg - Mild
		Skin (Rodent - rabbit): 500mg - Mild
		Skin: adverse effect observed (irritating) ^[1]
		Skin: no adverse effect observed (not irritating) ^[1]

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Legend:	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances
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CARBON BLACK	Inhalation (rat) TCLo: 50 mg/m3/6h/90D-I Nil reported No significant acute toxicological data identified in literature search.
ETHYLENE GLYCOL	[Estimated Lethal Dose (human) 100 ml; RTECS quoted by Orica] Substance is reproductive effector in rats (birth defects). Mutagenic to rat cells. For ethylene glycol: Ethylene glycol is quickly and extensively absorbed throughout the gastrointestinal tract. Limited information suggests that it is also absorbed through the airways; absorption through skin is apparently slow.
DIETHYLENE GLYCOL	Diglycolic acid is formed following the oxidation of accidentally ingested diethylene glycol in the body and can lead to severe complications with fatal outcome.
1,4-DIOXANE	Brain degenerative changes, kidney tubule changes, urine volume changes, lymphoma including Hodgkin's disease recorded. For 1,4-dioxane: Acute toxic effects reported in animals are mainly CNS depression, kidney and liver damage. Overt CNS effects (including convulsions) have been reported in rabbits administered (i.v.) 5 ml (2060 mg/kg) of 1,4-dioxane in solution.
ACETALDEHYDE	Laboratory (in vitro) and animal studies show, exposure to the material may result in a possible risk of irreversible effects, with the possibility of producing mutation. Tenth Annual Report on Carcinogens: Substance anticipated to be Carcinogen [National Toxicology Program: U.S. Dep. of Health & Human Services 2002]
CARBON BLACK & 1,4-DIOXANE & ACETALDEHYDE	WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
DIETHYLENE GLYCOL & 1,4-DIOXANE & ACETALDEHYDE	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
1,4-DIOXANE & ACETALDEHYDE	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound.

Acute Toxicity	✗	Carcinogenicity	✓
Skin Irritation/Corrosion	✗	Reproductivity	✗
Serious Eye Damage/Irritation	✗	STOT - Single Exposure	✗
Respiratory or Skin sensitisation	✗	STOT - Repeated Exposure	✓
Mutagenicity	✗	Aspiration Hazard	✗

Legend: ✗ – Data either not available or does not fill the criteria for classification
✓ – Data available to make classification

SECTION 12 Ecological information

Toxicity

Plexitrac Binder Black - 8401	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
carbon black	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	>0.2mg/l	2
	EC50	48h	Crustacea	33.076-41.968mg/l	4
	NOEC(ECx)	24h	Crustacea	3200mg/l	1
	LC50	96h	Fish	>100mg/l	2
ethylene glycol	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50(ECx)	Not Available	Algae or other aquatic plants	6500-7500mg/l	1
	EC50	48h	Crustacea	>100mg/l	2
	EC50	96h	Algae or other aquatic plants	6500-13000mg/l	1
	LC50	96h	Fish	8050mg/L	4
diethylene glycol	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	>6500<13000mg/l	2
	EC50	48h	Crustacea	>100mg/l	2
	NOEC(ECx)	192h	Algae or other aquatic plants	800mg/l	1
	EC50	96h	Algae or other aquatic plants	4566mg/l	2
	LC50	96h	Fish	>100mg/l	4

1,4-dioxane	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	>1000mg/l	2
	BCF	1008h	Fish	0.2-0.6	7
	EC50	48h	Crustacea	>1000mg/l	2
	NOEC(ECx)	Not Available	Fish	20mg/l	1
	LC50	96h	Fish	6700mg/l	2

acetaldehyde	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	>100mg/l	2
	EC50	48h	Crustacea	39.4-59.1mg/L	4
	EC50(ECx)	48h	Algae or other aquatic plants	0.02mg/l	4
	EC50	96h	Algae or other aquatic plants	236.6mg/L	4
	LC50	96h	Fish	28-34mg/L	4

Legend: *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. US EPA, Ecotox database - Aquatic Toxicity Data 4. ECETOC Aquatic Hazard Assessment Data 5. NITE (Japan) - Bioconcentration Data 6. METI (Japan) - Bioconcentration Data 7. Vendor Data*

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
ethylene glycol	LOW (Half-life = 24 days)	LOW (Half-life = 3.46 days)
diethylene glycol	LOW	LOW
1,4-dioxane	HIGH (Half-life = 360 days)	LOW (Half-life = 3.38 days)
acetaldehyde	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
ethylene glycol	LOW (BCF = 200)
diethylene glycol	LOW (BCF = 180)
1,4-dioxane	LOW (BCF = 0.7)
acetaldehyde	LOW (BCF = 1.2)

Mobility in soil

Ingredient	Mobility
ethylene glycol	HIGH (Log KOC = 1)
diethylene glycol	HIGH (Log KOC = 1)
1,4-dioxane	HIGH (Log KOC = 1)
acetaldehyde	HIGH (Log KOC = 1.498)

Other adverse effects

No evidence of ozone depleting properties were found in the current literature.

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	- Containers may still present a chemical hazard/ danger when empty. - Return to supplier for reuse/ recycling if possible. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. DO NOT allow wash water from cleaning or process equipment to enter drains. - It may be necessary to collect all wash water for treatment before disposal. - Recycle wherever possible or consult manufacturer for recycling options. - Consult State Land Waste Authority for disposal.
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SECTION 14 Transport information

Labels Required

Marine Pollutant	NO
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Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

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Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.7. Maritime transport in bulk according to IMO instruments

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
carbon black	Not Applicable
ethylene glycol	Not Applicable
diethylene glycol	Not Applicable
1,4-dioxane	Not Applicable
acetaldehyde	Not Applicable

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
carbon black	Not Applicable
ethylene glycol	Not Applicable
diethylene glycol	Not Applicable
1,4-dioxane	Not Applicable
acetaldehyde	Not Applicable

SECTION 15 Regulatory information

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

carbon black is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans
International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
US - Alaska Air Quality Control - Concentrations Triggering an Air Quality Episode for Air Pollutants Other Than PM-2.5
US - California Proposition 65 - Carcinogens
US - California Safe Drinking Water and Toxic Enforcement Act of 1986 - Proposition 65 List
US - Massachusetts - Right To Know Listed Chemicals
US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Carcinogens
US - New Jersey Right to Know Hazardous Substances
US - Pennsylvania - Hazardous Substance List
US DOE Temporary Emergency Exposure Limits (TEELs)
US NIOSH Recommended Exposure Limits (RELs)
US OSHA Permissible Exposure Limits (PELs) Table Z-1
US OSHA Permissible Exposure Limits (PELs) Table Z-3
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

ethylene glycol is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
US - California Hazardous Air Pollutants Identified as Toxic Air Contaminants
US - California Proposition 65 - Maximum Allowable Dose Levels (MADLs) for Chemicals Causing Reproductive Toxicity
US - California Proposition 65 - Reproductive Toxicity
US - California Safe Drinking Water and Toxic Enforcement Act of 1986 - Proposition 65 List
US - Massachusetts - Right To Know Listed Chemicals
US - New Jersey Right to Know Hazardous Substances
US - Pennsylvania - Hazardous Substance List
US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)
US Clean Air Act - Hazardous Air Pollutants
US DOE Temporary Emergency Exposure Limits (TEELs)
US EPA Integrated Risk Information System (IRIS)
US EPA Pesticide Chemical Search - Antimicrobial
US EPCRA Section 313 Chemical List
US New York City Community Right-to-Know: List of Hazardous Substances
US NIOSH Recommended Exposure Limits (RELs)
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

diethylene glycol is found on the following regulatory lists

US - Pennsylvania - Hazardous Substance List
US AIHA Workplace Environmental Exposure Levels (WEELs)
US DOE Temporary Emergency Exposure Limits (TEELs)
US EPA Pesticide Chemical Search - Conventional Chemical
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US Toxicology Excellence for Risk Assessment (TERA) Workplace Environmental Exposure Levels (WEEL)

1,4-dioxane is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans

Continued...

US - California Hazardous Air Pollutants Identified as Toxic Air Contaminants

US - California Proposition 65 - Carcinogens

US - California Proposition 65 - No Significant Risk Levels (NSRLs) for Carcinogens

US - California Safe Drinking Water and Toxic Enforcement Act of 1986 - Proposition 65 List

US - Massachusetts - Right To Know Listed Chemicals

US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Carcinogens

US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Flammables

US - New Jersey Right to Know Hazardous Substances

US - Pennsylvania - Hazardous Substance List

US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)

US Clean Air Act - Hazardous Air Pollutants

US DOE Temporary Emergency Exposure Limits (TEELs)

US EPA Carcinogens Listing

US EPA Drinking Water Treatability Database

US EPA Integrated Risk Information System (IRIS)

US EPA IRIS Carcinogens

US EPCRA Section 313 Chemical List

US National Toxicology Program (NTP) 15th Report Part B. Reasonably Anticipated to be a Human Carcinogen

US New York City Community Right-to-Know: List of Hazardous Substances

US NIOSH Recommended Exposure Limits (RELs)

US OSHA Permissible Exposure Limits (PELs) Table Z-1

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

acetaldehyde is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans

US - California Proposition 65 - Carcinogens

US - California Proposition 65 - No Significant Risk Levels (NSRLs) for Carcinogens

US - California Safe Drinking Water and Toxic Enforcement Act of 1986 - Proposition 65 List

US - Massachusetts - Right To Know Listed Chemicals

US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Carcinogens

US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Flammables

US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Mutagens

US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Reactive Materials

US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Teratogens

US - New Jersey Right to Know Hazardous Substances

US - Pennsylvania - Hazardous Substance List

US Clean Air Act - Hazardous Air Pollutants

US CWA (Clean Water Act) - List of Hazardous Substances

US Department of Homeland Security (DHS) - Chemical Facility Anti-Terrorism Standards (CFATS) - Chemicals of Interest

US DOE Temporary Emergency Exposure Limits (TEELs)

US EPA Carcinogens Listing

US EPA Integrated Risk Information System (IRIS)

US EPA IRIS Carcinogens

US EPCRA Section 313 Chemical List

US National Toxicology Program (NTP) 15th Report Part B. Reasonably Anticipated to be a Human Carcinogen

US New York City Community Right-to-Know: List of Hazardous Substances

US NIOSH Recommended Exposure Limits (RELs)

US OSHA Appendix A to § 1910.119—List of Highly Hazardous Chemicals, Toxics and Reactives (Mandatory)

US OSHA Permissible Exposure Limits (PELs) Table Z-1

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Section 4/12 (b) - Sunset Dates/Status

Additional Regulatory Information

Not Applicable

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	Yes

Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	No
Specific target organ toxicity (single or repeated exposure)	Yes
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

Name	Reportable Quantity in Pounds (lb)	Reportable Quantity in kg
ethylene glycol	5000	2270
1,4-dioxane	100	45.4
acetaldehyde	1000	454

US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know-Act of 1986 (40 CFR 372):

CAS No	%[weight]	Name
107-21-1	1.566	ethylene glycol

This information must be included in all SDSs that are copied and distributed for this material.

Additional Federal Regulatory Information

Not Applicable

State Regulations

US. California Proposition 65

 **WARNING:** This product can expose you to chemicals including **carbon black, 1,4-dioxane, acetaldehyde**, which are known to the State of California to cause cancer, and **ethylene glycol**, which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov

Additional State Regulatory Information

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSSL	No (carbon black; ethylene glycol; diethylene glycol; 1,4-dioxane; acetaldehyde)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	All chemical substances in this product have been designated as TSCA Inventory 'Active'
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
UAE - Control List (Banned/Restricted Substances)	No (carbon black; ethylene glycol; diethylene glycol; 1,4-dioxane; acetaldehyde)
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

Revision Date	07/14/2026
Initial Date	03/08/2017

CONTACT POINT

PLEASE NOTE THAT TITANIUM DIOXIDE IS NOT PRESENT IN CLEAR OR NEUTRAL BASES

SDS Version Summary

Version	Date of Update	Sections Updated
7.8	07/14/2026	Toxicological information - Chronic Health, Hazards identification - Classification, Disposal considerations - Disposal, Exposure controls / personal protection - Exposure Standard, Firefighting measures - Fire Fighter (fire/explosion hazard), Firefighting measures - Fire Fighter (fire incompatibility), Composition / information on ingredients - Ingredients, Exposure controls / personal protection - Personal Protection (Respirator), Handling and storage - Storage (storage incompatibility)

Other information

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

Definitions and abbreviations

- PC - TWA: Permissible Concentration-Time Weighted Average
- PC - STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit,
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- MARPOL: International Convention for the Prevention of Pollution from Ships
- IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code
- IBC: International Bulk Chemical Code

- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSDL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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