Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: December 12, 2018 Revision: December 12, 2018

1 Identification

· **Product identifier**

· **Trade name: Xenokote 420**

· **Other means of identification:** No other identifiers

· **Recommended use and restriction on use**
· **Recommended use:** Conductive graphite coating
· **Restrictions on use:** No relevant information available.

· **Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
Southwestern Graphite, Inc. (a division of Asbury Carbons Inc.)
2564 Highway 12
DeQuincy, LA 70633
USA
1-908-537-2155
asburyinfo@asbury.com

· **Emergency telephone number:**
ChemTel Inc.
1-800-255-3924 (North America)
+01-813-248-0585 (International)
0-800-591-6042 (Brazil)
400-120-0751 (China)
000-800-100-4086 (India)
01-800-099-0731 (Mexico)

2 Hazard(s) identification

· **Classification of the substance or mixture**

Flam. Liq. 2 H225 Highly flammable liquid and vapor.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Dam. 1 H318 Causes serious eye damage.
STOT SE 3 H336 May cause drowsiness or dizziness.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**

GHS02 GHS05 GHS07

· **Signal word:** Danger
· **Hazard statements:**
H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
· **Precautionary statements:**

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P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing mist, vapors, or spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a poison center/doctor.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use for extinction: Alcohol resistant foam or water spray.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

67-63-0	Propan-2-ol Flam. Liq. 2, H225 Eye Irrit. 2A, H319; STOT SE 3, H336	60-70%
7782-42-5	Graphite	10-20%
71-36-3	butan-1-ol Flam. Liq. 3, H226 Eye Dam. 1, H318 Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335-H336	<10%
107-41-5	2-methylpentane-2,4-diol Skin Irrit. 2, H315; Eye Irrit. 2A, H319 Flam. Liq. 4, H227	<10%

· **Additional information:**
For the wording of the listed Hazard Statements, refer to section 16.
For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

4 First-aid measures

· **Description of first aid measures**

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· **After inhalation:**
Supply fresh air; consult doctor in case of complaints.
Provide oxygen treatment if affected person has difficulty breathing.
In case of irregular breathing or respiratory arrest provide artificial respiration.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Immediately remove any clothing soiled by the product.
Immediately wash with water and soap and rinse thoroughly.
If skin irritation is experienced, consult a doctor.
· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
A person vomiting while lying on their back should be turned onto their side.
· **Most important symptoms and effects, both acute and delayed:**
Headache
Breathing difficulty
Dizziness
Coughing
Gastric or intestinal disorders when ingested.
Nausea in case of ingestion.
Causes skin and eye irritation.
· **Indication of any immediate medical attention and special treatment needed:** Treat symptomatically.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** Water stream.
· **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information:**
Eliminate all ignition sources if safe to do so.
Use large quantities of foam as it is partially destroyed by the product.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.

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Keep away from ignition sources.
Protect from heat.

· **Environmental precautions** Avoid release to the environment.

· **Methods and material for containment and cleaning up**
Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).
Send for recovery or disposal in suitable receptacles.
Used rags or other cleaning materials should be soaked with water and placed in a sealed container.

· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling**

· **Precautions for safe handling:**
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.
Open and handle receptacle with care.
Avoid breathing mist, vapors, or spray.
Avoid contact with the eyes and skin.

· **Information about protection against explosions and fires:**
Highly flammable liquid and vapor.
Keep ignition sources away - Do not smoke.
Fumes can combine with air to form an explosive mixture.
Protect against electrostatic charges.

· **Conditions for safe storage, including any incompatibilities**

· **Requirements to be met by storerooms and receptacles:**
Store in cool, dry conditions in well sealed receptacles.
Avoid storage near extreme heat, ignition sources or open flame.

· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizing agents.

· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
67-63-0 Propan-2-ol	
PEL (USA)	Long-term value: 980 mg/m³, 400 ppm
REL (USA)	Short-term value: 1225 mg/m³, 500 ppm Long-term value: 980 mg/m³, 400 ppm
TLV (USA)	Short-term value: 984 mg/m³, 400 ppm Long-term value: 492 mg/m³, 200 ppm BEI

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EL (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm
EV (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm
LMPE (Mexico)	Short-term value: 400 ppm Long-term value: 200 ppm A4, IBE
7782-42-5 Graphite	
PEL (USA)	Long-term value: 15 mppcf* mg/m³ *impinger samples counted by light field techn.
REL (USA)	Long-term value: 2.5* mg/m³ *respirable dust
TLV (USA)	Long-term value: 2* mg/m³ all forms except graphite fibers;*resp. fraction
EL (Canada)	Long-term value: 2 mg/m³ respirable
EV (Canada)	Long-term value: 2 mg/m³ respirable
LMPE (Mexico)	Long-term value: 2* mg/m³ *fracción respirable
71-36-3 butan-1-ol	
PEL (USA)	Long-term value: 300 mg/m³, 100 ppm
REL (USA)	Ceiling limit value: 150 mg/m³, 50 ppm Skin
TLV (USA)	Long-term value: 61 mg/m³, 20 ppm
EL (Canada)	Long-term value: 15 ppm Ceiling limit value: 30 ppm
EV (Canada)	Long-term value: 20 ppm
LMPE (Mexico)	Long-term value: 20 ppm
107-41-5 2-methylpentane-2,4-diol	
REL (USA)	Ceiling limit value: 125 mg/m³, 25 ppm
TLV (USA)	Short-term value: 50* 10** ppm Long-term value: 25* ppm *vapor **inh. fraction, aerosol only
EL (Canada)	Ceiling limit value: 25 ppm
EV (Canada)	Ceiling limit value: 120 mg/m³, 25 ppm
LMPE (Mexico)	Ceiling limit value: 25 ppm

· **Ingredients with biological limit values:**

67-63-0 Propan-2-ol	
BEI (USA)	40 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)

· **Exposure controls**

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· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Avoid breathing mist, vapors, or spray.
· **Engineering controls:** No relevant information available.
· **Breathing equipment:**
Use suitable respiratory protective device in case of insufficient ventilation.
For spills, respiratory protection may be advisable.
NIOSH or EN approved organic vapor respirator equipped with a dust/mist prefilter should be used.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Eye protection:**

Safety glasses

· **Body protection:** Protective work clothing
· **Limitation and supervision of exposure into the environment**
No relevant information available.
· **Risk management measures** No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **Appearance:**	
Form:	Liquid
Color:	Black
· **Odor:**	Alcohol-like
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Melting point/Melting range:**	Not determined.
· **Boiling point/Boiling range:**	>35 °C (>95 °F)
· **Flash point:**	<23 °C (<73.4 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/ vapor mixtures are possible.

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· **Explosion limits**	
Lower:	Not determined.
Upper:	Not determined.
· **Oxidizing properties:**	Non-oxidizing.
· **Vapor pressure:**	Not determined.
· **Density:**	
Relative density:	0.91
Vapor density:	Not determined.
Evaporation rate:	Not determined.
· **Solubility in / Miscibility with**	
Water:	Partly soluble.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Other information**	No relevant information available.

10 Stability and reactivity

· **Reactivity:** No relevant information available.
· **Chemical stability:** Stable under normal temperatures and pressures.
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
Keep away from heat and direct sunlight.
· **Possibility of hazardous reactions**
Highly flammable liquid and vapor.
Reacts with oxidizing agents.
Toxic fumes may be released if heated above the decomposition point.
Used empty containers may contain product gases which form explosive mixtures with air.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
· **Conditions to avoid** Excessive heat.
· **Incompatible materials** Oxidizers
· **Hazardous decomposition products**
Under fire conditions only:
Carbon monoxide and carbon dioxide

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**
67-63-0 Propan-2-ol

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Oral	LD50	5045 mg/kg (rat)
Dermal	LD50	12800 mg/kg (rabbit)
Inhalative	LC50/4h	30 mg/l (rat)
71-36-3 butan-1-ol		
Oral	LD50	790 mg/kg (rat)
Dermal	LD50	3400 mg/kg (rabbit)
Inhalative	LC50/4h	8000 mg/l (rat)

· **Primary irritant effect:**
· **On the skin:** Irritant to skin and mucous membranes.
· **On the eye:** Strong irritant with the danger of severe eye injury.
· **Sensitization:** Based on available data, the classification criteria are not met.

· **IARC (International Agency for Research on Cancer):**
None of the ingredients are listed.

· **NTP (National Toxicology Program):**
None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients are listed.

· **Probable route(s) of exposure:**
Ingestion.
Inhalation.
Eye contact.
Skin contact.
· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
· **Carcinogenicity:** Based on available data, the classification criteria are not met.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.
· **STOT-single exposure:** May cause drowsiness or dizziness.
· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity** No relevant information available.
· **Persistence and degradability** No relevant information available.
· **Bioaccumulative potential:** No relevant information available.
· **Mobility in soil:** No relevant information available.
· **Additional ecological information**
· **General notes:** Avoid release to the environment.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No relevant information available.

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13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**	
· **DOT, ADR/RID/ADN, IMDG, IATA**	UN1139
· **UN proper shipping name**	
· **DOT, IATA**	Coating solution
· **ADR/RID/ADN, IMDG**	COATING SOLUTION
· **Transport hazard class(es)**	
· **DOT**	
	
· **Class**	3
· **Label**	3
· **ADR/RID/ADN**	
	
· **Class**	3 (F1)
· **Label**	3
· **IMDG, IATA**	
	
· **Class**	3
· **Label**	3
· **Packing group**	
· **DOT, ADR/RID/ADN, IMDG, IATA**	II
· **Environmental hazards**	Not applicable.
· **Special precautions for user**	Warning: Flammable liquids

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· **Danger code (Kemler):**	33
· **EMS Number:**	F-E,S-E
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

· **Transport/Additional information:**

· **DOT**

Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each.

· **ADR/RID/ADN**

Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each.

· **IMDG**

Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each.

· **IATA**

Limited Quantity for packages less than 30 kg gross and inner packagings less than 0.5 L each / 1 L net.

15 Regulatory information

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

· **United States (USA)**

· **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

67-63-0	Propan-2-ol
71-36-3	butan-1-ol

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed.

· **Proposition 65 (California)**

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· **Chemicals known to cause cancer:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for females:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients are listed.

· **EPA (Environmental Protection Agency):**

71-36-3	butan-1-ol	D

· **IARC (International Agency for Research on Cancer):**
None of the ingredients are listed.

· **Canadian Domestic Substances List (DSL) (Substances not listed.):**
All ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistant, Bio-accumulable, Toxic
vPvB: very Persistent and very Bioaccumulative
OSHA: Occupational Safety & Health Administration
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Flam. Liq. 4: Flammable liquids – Category 4
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **Sources**
Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

SDS Prepared by:
ChemTel Inc.

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