



## Safety Data Sheet according to Regulation (EC) No 1907/2006

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BONDERITE L-GP 2404 ACHESON GRAPHITE DISPERSION  
IN SOLVENT known as DAG2404

SDS No. : 465194  
V003.0

Revision: 14.03.2017

printing date: 25.10.2018

Replaces version from: 24.02.2014

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

#### 1.1. Product identifier

BONDERITE L-GP 2404 ACHESON GRAPHITE DISPERSION IN SOLVENT known as DAG2404

#### Contains:

Stoddard solvent, <0.1% Benzene

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

Intended use:

Release agent

#### 1.3. Details of the supplier of the safety data sheet

Henkel AG & Co. KGaA

Henkelstr. 67

40589 Düsseldorf

Germany

Phone: +49 (211) 797 0

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#### 1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (CLP):

Flammable liquids Category 3

H226 Flammable liquid and vapor.

Specific target organ toxicity - repeated exposure Category 1

H372 Causes damage to organs through prolonged or repeated exposure.

Route of Exposure: Inhalation

**||| Chronic hazards to the aquatic environment Category 2**

**||| H411 Toxic to aquatic life with long lasting effects.**

#### 2.2. Label elements

##### Label elements (CLP):

**Hazard pictogram:****Signal word:** Danger

**Hazard statement:** H226 Flammable liquid and vapor.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.

**Precautionary statement:** P210 Keep away from heat/open flames/hot surfaces. - No smoking.  
**Prevention** P260 Do not breathe mist/vapours.

**Precautionary statement:** P370+P378 In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction.  
**Response**

**2.3. Other hazards**

None if used properly.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Base substances of preparation:**Pigment  
solvent**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Stoddard solvent, <0.1% Benzene 8052-41-3	232-489-3	60- 80 %	Asp. Tox. 1 H304 STOT RE 1 H372 Aquatic Chronic 2 H411
1,2,4-Trimethylbenzene 95-63-6	202-436-9 01-2119472135-42	1- 5 %	Flam. Liq. 3 H226 Eye Irrit. 2 H319 STOT SE 3 H335 Aquatic Chronic 2 H411 Skin Irrit. 2 H315 Acute Tox. 4; Inhalation H332
Naphthalene 91-20-3	202-049-5 01-2119561346-37	0,1- < 1 %	Flam. Sol. 2 H228 Acute Tox. 4 H302 Carc. 2 H351 Aquatic Acute 1 H400 Aquatic Chronic 1 H410
Polyisobutylene 9003-27-4		1- < 5 %	Aquatic Chronic 4 H413

For full text of the H - statements and other abbreviations see section 16 "Other information".

Substances without classification may have community workplace exposure limits available.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**Inhalation:**

Move to fresh air, consult doctor if complaint persists.

**Skin contact:**

Rinse with running water and soap.

In case of adverse health effects seek medical advice.

**Eye contact:**

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

**Ingestion:**

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

### 4.2. Most important symptoms and effects, both acute and delayed

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

### 4.3. Indication of any immediate medical attention and special treatment needed

See section: Description of first aid measures

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media:**

Carbon dioxide, foam, powder

Fine water spray

**Extinguishing media which must not be used for safety reasons:**

High pressure waterjet

### 5.2. Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in fires.

### 5.3. Advice for firefighters

Wear protective equipment.

Wear self-contained breathing apparatus.

**Additional information:**

Cool endangered containers with water spray jet.

## SECTION 6: Accidental release measures

**General information:**

Danger of slipping on spilled product.

### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid skin and eye contact.

Remove sources of ignition.

### 6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

### 6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Dispose of contaminated material as waste according to Section 13.

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**6.4. Reference to other sections**

See advice in section 8

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

- Ensure that workrooms are adequately ventilated.
- Avoid open flames and sources of ignition.
- Ground/bond container and receiving equipment.
- Use explosion proof electric equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.

**7.2. Conditions for safe storage, including any incompatibilities**

- Store only in the original container.
- Store in a cool, well-ventilated place.
- Storage at 10 to 30°C is recommended.
- Do not store together with oxidants.

**7.3. Specific end use(s)**

Release agent

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure Limits

Valid for  
Germany

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Graphite 7782-42-5		10	Exposure limit(s):	2	TRGS 900
Graphite 7782-42-5			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Graphite 7782-42-5		1,25	Exposure limit(s):		TRGS 900
1,2,4-Trimethylbenzene 95-63-6 [1,2,4-TRIMETHYLBENZENE]	20	100	Time Weighted Average (TWA):	Indicative	ECTLV
1,2,4-Trimethylbenzene 95-63-6	20	100	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
1,2,4-Trimethylbenzene 95-63-6			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Naphthalene 91-20-3 [NAPHTHALENE]	10	50	Time Weighted Average (TWA):	Indicative	ECTLV
Naphthalene 91-20-3	0,1	0,5	Exposure limit(s):	1 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Naphthalene 91-20-3			Skin designation:	Can be absorbed through the skin.	TRGS 900
Naphthalene 91-20-3			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
Naphthalene 91-20-3 [BENZO(A)PYRENE IN CERTAIN PAH MIXTURES (INHALABLE FRACTION)]			Tolerance Concentration (4 x 10 <sup>-3</sup> ):		TRGS 910
Naphthalene 91-20-3 [BENZO(A)PYRENE IN CERTAIN PAH MIXTURES (INHALABLE FRACTION)]			Excursion factor:	8 Factor by which the average shift value (SMW) can be exceeded four times per shift during a maximum. period of 15 minutes each.	TRGS 910
Naphthalene 91-20-3 [BENZO(A)PYRENE IN CERTAIN PAH MIXTURES (INHALABLE FRACTION)]			Acceptance concentration (4 x 10 <sup>-4</sup> ):		TRGS 910
Naphthalene 91-20-3 [BENZO(A)PYRENE IN CERTAIN PAH MIXTURES (INHALABLE FRACTION)]			Skin designation:	Can be absorbed through the skin.	TRGS 910

**Biological Exposure Indices:**

Ingredient [Regulated substance]	Parameters	Biological specimen	Sampling time	Conc.	Basis of biol. exposure index	Remark	Additional Information
1,2,4-Trimethylbenzene 95-63-6	Dimethylbenzoic acids (sum of isomers with hydrolysis)	Creatinine in urine	Sampling time: End of shift at end of work week.	400 mg/g	DE BGW		

**8.2. Exposure controls:**

## Engineering controls:

Ensure good ventilation/extraction.

## Respiratory protection:

In case of aerosol formation, we recommend wearing of appropriate respiratory protection equipment with ABEK P2 filter (EN 14387).

This recommendation should be matched to local conditions.

## Hand protection:

Chemical-resistant protective gloves (EN 374). Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374): Isobutylene-isoprene rubber (IIR;  $\geq 0.7$  mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Isobutylene-isoprene rubber (IIR;  $\geq 0.7$  mm thickness) This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

## Eye protection:

Tightly fitting safety goggles

Protective eye equipment should conform to EN166.

## Skin protection:

Wear suitable protective clothing.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

## Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Appearance	liquid Liquid
Odor	black mild
Odour threshold	No data available / Not applicable
pH	Not available.
Initial boiling point	157 - 203 °C (314.6 - 397.4 °F)
Flash point	40,5 °C (104.9 °F); Tagliabue closed cup
Decomposition temperature	No data available / Not applicable
Vapour pressure	2 mm hg
Density	No data available / Not applicable
Bulk density	No data available / Not applicable
Viscosity	5 - 75 cp
( )	

Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative) (Solvent: Water)	Insoluble
Solidification temperature	No data available / Not applicable
Melting point	-70 °C (-94 °F)
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	No data available / Not applicable
Oxidising properties	No data available / Not applicable

**9.2. Other information**

No data available / Not applicable

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Reaction with strong oxidants.

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

See section reactivity

**10.4. Conditions to avoid**

No decomposition if used according to specifications.

**10.5. Incompatible materials**

See section reactivity.

**10.6. Hazardous decomposition products**

None if used for intended purpose.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****General toxicological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**STOT-repeated exposure:**

Causes damage to organs through prolonged or repeated exposure.

Route of exposure: inhalation

**Acute oral toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
1,2,4-Trimethylbenzene 95-63-6	LD50	6.000 mg/kg	oral		rat	EU Method B.1 (Acute Toxicity (Oral)) Expert judgement
Naphthalene 91-20-3	Acute toxicity estimate (ATE)	500 mg/kg	oral			
Naphthalene 91-20-3	LD0	>= 2.000 mg/kg			rat	OECD Guideline 401 (Acute Oral Toxicity) not specified
Polyisobutylene 9003-27-4	LD50	> 5.000 mg/kg	oral		rat	

**Acute inhalative toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Naphthalene 91-20-3	Acute toxicity estimate (ATE)	5,1 mg/l	aerosol			Expert judgement
Naphthalene 91-20-3	LC50	> 100 ppm		8 h	rat	

**Acute dermal toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
1,2,4-Trimethylbenzene 95-63-6	LD50	> 3.440 mg/kg	dermal		rat	not specified
Naphthalene 91-20-3	LD50	> 2.500 mg/kg	dermal		rat	not specified
Polyisobutylene 9003-27-4	LD50	> 5.000 mg/kg	dermal		rat	not specified

**Skin corrosion/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
1,2,4-Trimethylbenzene 95-63-6	irritating	4 h	rabbit	EU Method B.4 (Acute Toxicity: Dermal Irritation / Corrosion)
Naphthalene 91-20-3	slightly irritating		rabbit	not specified

**Serious eye damage/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Naphthalene 91-20-3	slightly irritating		rabbit	Draize Test

**Respiratory or skin sensitization:**

Hazardous components CAS-No.	Result	Test type	Species	Method
1,2,4-Trimethylbenzene 95-63-6	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Naphthalene 91-20-3	not sensitising	no data	guinea pig	not specified

**Germ cell mutagenicity:**

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
1,2,4-Trimethylbenzene 95-63-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	negative	in vitro mammalian chromosome aberration test	with and without		EU Method B.10 (Mutagenicity)
	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
1,2,4-Trimethylbenzene 95-63-6	negative	intraperitoneal		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Naphthalene 91-20-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified

**Reproductive toxicity:**

Hazardous substances CAS-No.	Result / Classification	Species	Exposure time	Species	Method
1,2,4-Trimethylbenzene 95-63-6	NOAEL P = 500 ppm NOAEL F1 = 500 ppm NOAEL F2 = 500 ppm	multigenerat ion study inhalation: vapour	6 h/d	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)

**Repeated dose toxicity**

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
1,2,4-Trimethylbenzene 95-63-6	NOAEL=600 mg/kg	oral: gavage	90 d5 d/w	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

**SECTION 12: Ecological information****General ecological information:**

Do not empty into drains / surface water / ground water.

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**Other adverse effects:**

The product contains hydrocarbons.

**12.1. Toxicity****Ecotoxicity:**

Toxic to aquatic life with long lasting effects.

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
1,2,4-Trimethylbenzene 95-63-6	LC50	7,7 mg/l	Fish	192 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
1,2,4-Trimethylbenzene 95-63-6	EC50	3,6 mg/l	Daphnia	48 h	Daphnia sp.	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Naphthalene 91-20-3	LC50	0,11 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Naphthalene 91-20-3	EC50	2,16 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Naphthalene 91-20-3	EC10	> 20 mg/l	Bacteria	18 h		not specified
Polyisobutylene 9003-27-4	LC50	> 100 mg/l	Fish	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Polyisobutylene 9003-27-4	EC0	> 1.000 mg/l	Bacteria	3 h		OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

**12.2. Persistence and degradability**

No data available.

**12.3. Bioaccumulative potential / 12.4. Mobility in soil**

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
1,2,4-Trimethylbenzene 95-63-6	3,63					not specified
Naphthalene 91-20-3	3,4				25 °C	OECD Guideline 107 (Partition Coefficient (n- octanol / water), Shake Flask Method)

**12.5. Results of PBT and vPvB assessment**

Hazardous components CAS-No.	PBT/vPvB
Naphthalene 91-20-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Polyisobutylene 9003-27-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

**12.6. Other adverse effects**

No data available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

Product disposal:

In consultation with the responsible local authority, must be subjected to special treatment.

Waste code

080199

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

**SECTION 14: Transport information****14.1. UN number**

ADR	1268
RID	1268
ADN	1268
IMDG	1268
IATA	1268

**14.2. UN proper shipping name**

ADR	PETROLEUM DISTILLATES, N.O.S.
RID	PETROLEUM DISTILLATES, N.O.S.
ADN	PETROLEUM DISTILLATES, N.O.S.
IMDG	PETROLEUM DISTILLATES, N.O.S. (Stoddard Solvent)
IATA	Petroleum distillates, n.o.s.

**14.3. Transport hazard class(es)**

ADR	3
RID	3
ADN	3
IMDG	3
IATA	3

**14.4. Packing group**

ADR	III
RID	III
ADN	III
IMDG	III
IATA	III

**14.5. Environmental hazards**

ADR	Environmentally Hazardous
RID	Environmentally Hazardous
ADN	Environmentally Hazardous
IMDG	Marine pollutant
IATA	not applicable

**14.6. Special precautions for user**

ADR	not applicable Tunnelcode: (D/E)
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

VOC content (2010/75/EU)	85,1 %
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### 15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

#### National regulations/information (Germany):

WGK: WGK = 2, water endangering product. Classification according to the mixture rules in German VwVwS regulation annex 4 from 27.July 2005.

Storage class according to TRGS 510: 3

## SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

- H226 Flammable liquid and vapor.
- H228 Flammable solid.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.
- H413 May cause long lasting harmful effects to aquatic life.

**Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.**