

# SAFETY DATA SHEET

## LD42B-YAS

Version 1.0

Revision Date 12/31/2021

Former date -

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : LD42B-YAS

#### Manufacturer or supplier's details

: Borealis Compounds Inc  
176 Thomas Road, NJ 07865 Port Murray, United States of America (USA)  
Telephone: +1 908 850 6200

E-mail address : [sds@borealisgroup.com](mailto:sds@borealisgroup.com)

Emergency telephone number : Borealis Compounds Inc, Borealis North America HSE: 908-850-6200 for Monday – Friday 8-4:30pm excluding holidays  
+1 215 207 0061 (regional number, NCEC Carechem 24)

#### Recommended use of the chemical and restrictions on use

Recommended use : Raw material for plastics industry

Restrictions on use : Use only according to our recommendations.

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Reproductive toxicity : Category 1B

Specific target organ toxicity : Category 1 (Immune system)  
- repeated exposure

#### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H360D May damage the unborn child.  
H372 Causes damage to organs (Immune system) through prolonged or repeated exposure.

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Precautionary statements

- Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response:**  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
- Storage:**  
P405 Store locked up.
- Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards

Warning!

May form combustible dust concentrations in air (during processing).

The product burns, but is not classified as flammable.

During crosslinking reaction in combination with catalyst masterbatch: methanol (Flam. Liq. 2; H225, Acute Tox. 3; H301, Acute Tox. 3; H311, Acute Tox. 3; H331, STOT SE 1; H370 - see chapter 16) may be released.

In contact with water or moisture methanol will be released.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Hazardous components

Chemical name	CAS-No.	Concentration (%)
carbon black	1333-86-4	$\geq 30$ - $< 50$
Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene	68610-51-5	$\geq 1$ - $< 5$
dioctyltin dilaurate	3648-18-8	$\geq 1$ - $< 5$

Actual concentration is withheld as a trade secret

## SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air in case of accidental inhalation of vapours or decomposition products.

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	Seek medical advice immediately.
In case of skin contact	: If molten material comes in contact with the skin, cool with plenty of water. DO NOT remove solidified product, as removal could result in severe tissue damage. Obtain medical attention.  Wash off with soap and plenty of water. Call a physician if irritation develops or persists.
In case of eye contact	: Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.
If swallowed	: If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately.
Most important symptoms and effects, both acute and delayed	: Inhalation of dust may irritate the respiratory tract. Prolonged inhalation of high doses of decomposition products may give headache or irritation of the respiratory tract.  Symptoms of poisoning (methanol): Daze Dizziness Nausea Abdominal pain Respiratory disorders  Symptoms of poisoning, prolonged exposure (methanol): Blindness  May damage the unborn child. Causes damage to organs through prolonged or repeated exposure.
Notes to physician	: Treat symptomatically. No specific instructions needed.

### SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Water in spread jet, dry chemicals, foam or carbon dioxide.
Unsuitable extinguishing media	: High volume water jet
Specific hazards during firefighting	: Principal toxicant in the smoke is carbon monoxide.  Avoid generating dust; fine dust dispersed in air in sufficient

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concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Special protective equipment : Wear self-contained breathing apparatus and protective suit. for firefighters

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### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Ensure adequate ventilation.

Environmental precautions : It is recommended to implement systems and practices (such as Operation Clean Sweep®) to prevent accidental release of plastics in to the environment.

Should not be released into the environment.

It is recommended to implement systems and practices (such as Operation Clean Sweep®) to prevent accidental release of plastics in to the environment.

Methods and materials for containment and cleaning up : Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Non-sparking tools should be used. Vacuum or sweep up spill. All spill of material must be removed immediately to prevent slipping accidents. Recycle or dispose loose material properly. Do not flush into surface water or sanitary sewer system.

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### SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Dust from the product gives a potential risk for dust explosion. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. All equipment shall be grounded.

Advice on safe handling : During processing and thermal treatment of the product, small amounts of volatile hydrocarbons may be released. Provide adequate ventilation. Local exhaust ventilation may be necessary. Avoid inhalation of dust and decomposition fumes. Avoid contact with skin and eyes.

Conditions for safe storage : Store locked up.

Further information on : Keep in a dry place.

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storage stability

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
carbon black	1333-86-4	TWA	3.5 mg/m <sup>3</sup>	NIOSH REL
		TWA	3.5 mg/m <sup>3</sup>	OSHA Z-1
		TWA	3.5 mg/m <sup>3</sup>	OSHA P0
		TWA	0.1 mg/m <sup>3</sup> (PAHs)	NIOSH REL
		TWA (Inhalable particulate matter)	3 mg/m <sup>3</sup>	ACGIH
		PEL	3.5 mg/m <sup>3</sup>	CAL PEL
dioctyltin dilaurate	3648-18-8	TWA	0.1 mg/m <sup>3</sup> (Tin)	OSHA Z-1
		TWA	0.1 mg/m <sup>3</sup> (Tin)	ACGIH
		STEL	0.2 mg/m <sup>3</sup> (Tin)	ACGIH
		TWA	0.1 mg/m <sup>3</sup> (Tin)	OSHA P0
		TWA	0.1 mg/m <sup>3</sup> (Tin)	NIOSH REL
		PEL	0.1 mg/m <sup>3</sup> (Tin)	CAL PEL
		STEL	0.2 mg/m <sup>3</sup> (Tin)	CAL PEL

#### Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m <sup>3</sup>	NIOSH REL
		ST	250 ppm 325 mg/m <sup>3</sup>	NIOSH REL
		TWA	200 ppm 260 mg/m <sup>3</sup>	OSHA Z-1
		TWA	200 ppm	OSHA P0

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			260 mg/m3	
		STEL	250 ppm 325 mg/m3	OSHA P0
		C	1,000 ppm	CAL PEL
		PEL	200 ppm 260 mg/m3	CAL PEL
		STEL	250 ppm 325 mg/m3	CAL PEL

### Engineering measures

: Provide adequate ventilation.  
Local exhaust ventilation may be necessary.

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment.

### Personal protective equipment

#### Respiratory protection

: In case of dust development use dust mask.  
In the case of vapour formation use a respirator with an approved filter.

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

#### Hand protection

Material : butyl-rubber  
Break through time : >= 480 min  
Glove thickness : 0.5 mm

Material : Fluorinated rubber  
Break through time : >= 480 min  
Glove thickness : 0.4 mm

#### Remarks

: Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

#### Eye protection

: Safety glasses

#### Skin and body protection

: Protective clothing

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Hygiene measures : When using do not eat, drink or smoke.  
Wash hands before breaks and at the end of workday.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : pellets

Colour : black

pH : Not applicable insoluble

Boiling range : Decomposes on heating.

Flash point : Not applicable (solid)

Evaporation rate : Not applicable (solid)

Flammability (solid, gas) : The product is not flammable.

Upper explosion limit : Not applicable

Lower explosion limit : Not applicable

Vapour pressure : Not applicable (solid)

Density : 1.1 - 1.2 g/cm<sup>3</sup>

Solubility(ies)  
Water solubility : insoluble

Partition coefficient: n-octanol/water : Not applicable insoluble

Viscosity  
Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

### SECTION 10. STABILITY AND REACTIVITY

Reactivity : Stable under recommended storage conditions.

Chemical stability : The product is a stable thermoplastic, with no chemical

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		reactivity. The intended crosslinking reaction occurs in combination with the base resin and moisture: at ambient conditions, in sauna or hot water bath.
Possibility of hazardous reactions	:	In contact with water or moisture methanol will be released.
Conditions to avoid	:	Exposure to moisture Extremes of temperature and direct sunlight.
Incompatible materials	:	None known.
Hazardous decomposition products	:	Under fire conditions: Carbon monoxide
		During processing and thermal treatment of the product, small amounts of volatile hydrocarbons may be released. During crosslinking reaction in combination with base resin: methanol

## SECTION 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

Based on available data, the classification criteria are not met.

### Skin corrosion/irritation

Based on available data, the classification criteria are not met.

### Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

### Respiratory or skin sensitisation

#### Skin sensitisation

Based on available data, the classification criteria are not met.

#### Respiratory sensitisation

Based on available data, the classification criteria are not met.

### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

### Carcinogenicity

Based on available data, the classification criteria are not met.

#### IARC

Group 2B: Possibly carcinogenic to humans

carbon black

1333-86-4

#### OSHA

No component of this product present at levels greater than or



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equal to 0.1% is on OSHA's list of regulated carcinogens.

### NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### Reproductive toxicity

May damage the unborn child.

### Components:

#### Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene:

Effects on fertility : Test Type: Pre-/postnatal development  
Species: Rabbit, female  
Application Route: Oral  
Dose: 50 mg/kg  
Method: OECD Test Guideline 414  
Result: Some evidence of adverse effects on development, based on animal experiments.  
GLP: yes

### STOT - single exposure

Based on available data, the classification criteria are not met.

### STOT - repeated exposure

Causes damage to organs (Immune system) through prolonged or repeated exposure.

### Aspiration toxicity

Based on available data, the classification criteria are not met.

### Further information

#### Product:

Remarks: During crosslinking reaction in combination with base resin: methanol (Flam. Liq. 2; H225, Acute Tox. 3; H301, Acute Tox. 3; H311, Acute Tox. 3; H331, STOT SE 1; H370) is released. Methanol: Toxic by inhalation, in contact with skin and if swallowed. Causes damage to organs.

Remarks: Inhalation of dust may irritate the respiratory tract. Prolonged inhalation of high doses of decomposition products may give headache or irritation of the respiratory tract.

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

#### Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.2 mg/l  
Exposure time: 96 h

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Method: OECD Test Guideline 203

Remarks: No effect up to the limit of solubility.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0.2 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: No effect up to the limit of solubility.

Toxicity to algae : EC50 (Selenastrum capricornutum (fresh water algae)): > 0.2 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: No effect up to the limit of solubility.

### Persistence and degradability

#### Product:

Biodegradability : Remarks: Not readily biodegradable.

### Bioaccumulative potential

#### Product:

Bioaccumulation : Remarks: Does not accumulate in organisms.

### Mobility in soil

#### Product:

Mobility : Remarks: Not expected to adsorb on soil.

### Other adverse effects

#### Product:

Additional ecological information : Should not be released into the environment.

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : This substance, when discarded or disposed of is not specifically listed as a hazardous waste in Federal regulations. However, it could be hazardous if it is considered toxic, corrosive, ignitable or reactive according to Federal definitions (40 CFR 261). Additionally, it could be designated as hazardous waste if it is mixed with or comes in contact with a hazardous waste. If such contact or mixing may have occurred, check 40 CFR 261 to determine whether it is a hazardous waste.

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The transportation, storage, treatment and disposal of this waste material must be conducted in accordance with all applicable Federal, state and local regulations.

Contaminated packaging : Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.

### SECTION 14. TRANSPORT INFORMATION

#### International Regulations

##### UNRTDG

Not regulated as a dangerous good

##### IATA-DGR

Not regulated as a dangerous good

##### IMDG-Code

Not regulated as a dangerous good

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### National Regulations

##### 49 CFR

Not regulated as a dangerous good

#### Special precautions for user

Remarks : Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

### SECTION 15. REGULATORY INFORMATION

Borealis certifies that all chemical substances in this shipment comply with all applicable rules or orders under TSCA and that Borealis is not offering a chemical substance for entry in violation of TSCA or any applicable rule or order under TSCA.

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

The product is classified and labelled in accordance with Hazard Communication Standard 2012 (29 CFR 1910.1200)

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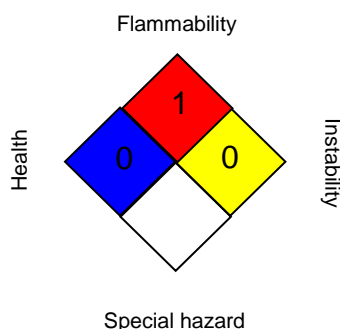
### California Prop. 65

WARNING: This product can expose you to chemicals including dioctyltin dilaurate, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA:



#### HMIS® IV:

HEALTH	*	3
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Sources of key data used to compile the Safety Data Sheet : Safety data sheets of raw material suppliers.

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### Disclaimer

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication; however we do not assume any liability whatsoever for the accuracy and completeness of such information.

**BOREALIS MAKES NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION CONTAINED HEREIN. NOTHING HEREIN SHALL CONSTITUTE ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

**IT IS THE CUSTOMER'S RESPONSIBILITY TO INSPECT AND TEST OUR PRODUCTS IN ORDER TO SATISFY ITSELF AS TO THE SUITABILITY OF THE PRODUCTS FOR THE**

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**CUSTOMER'S PARTICULAR PURPOSE. THE CUSTOMER IS RESPONSIBLE FOR THE APPROPRIATE, SAFE AND LEGAL USE, PROCESSING AND HANDLING OF OUR PRODUCTS.**

No liability can be accepted in respect of the use of Borealis' products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials.