

Safety Data Sheet

Product Identifier: Manus Bond 73A Black

SDS ID: MAN-024

Section 1 - IDENTIFICATION

Product Identifier:

Manus Bond 73A Black

Recommended Use

adhesives / sealant

Restrictions on Use

None known.

Manufacturer Information

Manus Products, Inc.
866 Industrial Blvd. West
Waconia, MN 55387

Phone: (952) 442-3323

Emergency # (800) 424-9300

Section 2 - HAZARD(S) IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Not a hazardous substance or mixture.

Precautionary Statements : **Prevention:**

P271 Use only outdoors or in a well-ventilated area.

Other hazards

None known.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Silicone elastomer

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Distillates (petroleum), hydrotreated middle	64742-46-7	>= 5 - < 10
Silicon dioxide	7631-86-9	>= 5 - < 10
Titanium dioxide	13463-67-7	>= 0.1 - < 1
Carbon black	1333-86-4	>= 0.1 - < 1

Section 4 - FIRST-AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

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- In case of skin contact : Wash with water and soap as a precaution.
Get medical attention if symptoms occur.
- In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : None known.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
- Notes to physician : Treat symptomatically and supportively.

Section 5 - FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Dry chemical
Carbon dioxide (CO2)
- Unsuitable extinguishing media : None known.
- Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides
Silicon oxides
Formaldehyde
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Section 6 - ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Follow safe handling advice and personal protective equipment recommendations.

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- Environmental precautions : Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material.
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

Section 7 - HANDLING AND STORAGE

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : Use only with adequate ventilation.
- Advice on safe handling : Do not swallow.
Avoid contact with eyes.
Avoid prolonged or repeated contact with skin.
Handle in accordance with good industrial hygiene and safety practice.
Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labeled containers.
Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:
Strong oxidizing agents

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), hydrotreated middle	64742-46-7	TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Mist)	5 mg/m3	OSHA P0
		TWA (Mist)	5 mg/m3	NIOSH REL
		ST (Mist)	10 mg/m3	NIOSH REL
Silicon dioxide	7631-86-9	TWA (Dust)	20 Million particles per cubic	OSHA Z-3

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			foot (Silica)	
		TWA (Dust)	80 mg/m3 / %SiO2 (Silica)	OSHA Z-3
		TWA	6 mg/m3 (Silica)	NIOSH REL
Titanium dioxide	13463-67-7	TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA	10 mg/m3 (Titanium dioxide)	ACGIH
Carbon black	1333-86-4	TWA	3.5 mg/m3	NIOSH REL
		TWA	3.5 mg/m3	OSHA Z-1
		TWA (Inhalable fraction)	3 mg/m3	ACGIH

Engineering measures : Processing may form hazardous compounds (see section 10).
Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection
Material

: Impervious gloves

Remarks

: Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection

: Wear the following personal protective equipment:
Safety glasses

Skin and body protection

: Skin should be washed after contact.

Hygiene measures

: Ensure that eye flushing systems and safety showers are located close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.
These precautions are for room temperature handling. Use at

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elevated temperature or aerosol/spray applications may require added precautions.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: paste
Color	: in accordance with the product description
Odor	: Acetic acid
Odor Threshold	: No data available
pH	: Not applicable
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: Not applicable
Flash point	: > 100 °C Method: closed cup
Evaporation rate	: Not applicable
Flammability (solid, gas)	: Not classified as a flammability hazard
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapor pressure	: Not applicable
Relative vapor density	: No data available
Relative density	: 0.96
Solubility(ies) Water solubility	: No data available
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity Viscosity, dynamic	: 200,000 mPa.s
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Molecular weight	: No data available

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Section 10 - STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Use at elevated temperatures may form highly hazardous compounds. Can react with strong oxidizing agents. Acetic acid is formed upon contact with water or humid air. Hazardous decomposition products will be formed at elevated temperatures.
Conditions to avoid	: None known.
Incompatible materials	: Oxidizing agents
Hazardous decomposition products	
Thermal decomposition	: Formaldehyde

Section 11 - TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute inhalation toxicity : Acute toxicity estimate: 8.09 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Ingredients:

Distillates (petroleum), hydrotreated middle:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 1.78 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Silicon dioxide:

Acute oral toxicity : LD50 (Rat): > 3,300 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Information taken from reference works and the literature.

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Acute inhalation toxicity : LC50 (Rat): > 2.08 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Information taken from reference works and the literature.

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Information taken from reference works and the literature.

Titanium dioxide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 6.82 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Carbon black:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 0.0046 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Skin corrosion/irritation

Not classified based on available information.

Ingredients:

Silicon dioxide:

Result: No skin irritation

Remarks: Information taken from reference works and the literature.

Titanium dioxide:

Species: Rabbit

Result: No skin irritation

Carbon black:

Species: Rabbit

Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Ingredients:

Silicon dioxide:

Result: No eye irritation

Remarks: Information taken from reference works and the literature.

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Titanium dioxide:

Species: Rabbit

Result: No eye irritation

Carbon black:

Species: Rabbit

Result: No eye irritation

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

Ingredients:

Silicon dioxide:

Assessment: Does not cause skin sensitization.

Test Type: Skin: test type not specified

Species: Guinea pig

Remarks: No known sensitising effect.

Information taken from reference works and the literature.

Titanium dioxide:

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse

Result: negative

Carbon black:

Test Type: Buehler Test

Routes of exposure: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: negative

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

Silicon dioxide:

Genotoxicity in vitro : Result: negative
Remarks: Information taken from reference works and the literature.

Genotoxicity in vivo : Application Route: Ingestion
Result: negative
Remarks: Information taken from reference works and the literature.

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

Titanium dioxide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse

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Result: negative

Carbon black:

Genotoxicity in vitro

: Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Carcinogenicity

Not classified based on available information.

Ingredients:

Titanium dioxide:

Species: Rat

Application Route: inhalation (dust/mist/fume)

Exposure time: 24 Months

Method: OECD Test Guideline 453

Result: positive

Remarks: The mechanism or mode of action may not be relevant in humans.

The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Carcinogenicity - Assessment

: Limited evidence of carcinogenicity in inhalation studies with animals.

Carbon black:

Species: Rat

Application Route:

Inhalation Exposure time: 2

Years Result: positive

Target Organs: Lungs

Remarks: The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Carcinogenicity - Assessment

: Sufficient evidence of carcinogenicity in inhalation studies with animals

IARC

Group 2B: Possibly carcinogenic to humans

Titanium dioxide

13463-67-7

Carbon black

1333-86-4

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient 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

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

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Ingredients:

Carbon black:

Routes of exposure: inhalation (dust/mist/fume)

Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

Repeated dose toxicity

Ingredients:

Titanium dioxide:

Species: Rat

NOAEL: 24,000 mg/kg

Application Route: Ingestion

Exposure time: 28 d

Species: Rat

NOAEL: 10

mg/m³

Application Route: inhalation

(dust/mist/fume) Exposure time: 2 y

Remarks: The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Carbon black:

Species: Rat

NOAEL: 1

mg/m³ LOAEL: 7

mg/m³

Application Route: Inhalation

Test atmosphere: dust/mist

Exposure time: 90 d

Remarks: The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Aspiration toxicity

Not classified based on available information.

Ingredients:

Distillates (petroleum), hydrotreated middle:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be re-garded as if it causes a human aspiration toxicity hazard.

*****Section 12 - ECOLOGICAL INFORMATION*****

Ecotoxicity

Ingredients:

Titanium dioxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l
Exposure time: 72 h

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Toxicity to bacteria : EC50: > 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Carbon black:

Toxicity to fish : LC0 (Danio rerio (zebra fish)): 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 5,600 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 202

Toxicity to algae : NOEC (Desmodesmus subspicatus (green algae)): 10,000 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

Section 13 - DISPOSAL CONSIDERATIONS

Disposal methods

Resource Conservation and Recovery Act (RCRA) : This product has been evaluated for RCRA characteristics and does not meet the criteria of hazardous waste if discarded in its purchased form.

Waste from residues : Dispose of in accordance with 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 Regulation

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

* * *Section 15 - REGULATORY INFORMATION* * *

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Acetic acid	64-19-7	5000	*
Acetic anhydride	108-24-7	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
10,10-Oxydiphenoxarsine	58-36-6	500	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know

Dimethyl siloxane, hydroxy-terminated	70131-67-8	70 - 90 %
Distillates (petroleum), hydrotreated middle	64742-46-7	5 - 10 %
Silicon dioxide	7631-86-9	5 - 10 %
Aluminium	7429-90-5	0 - 0.1 %
Acetic acid	64-19-7	0 - 0.1 %
Acetic anhydride	108-24-7	0 - 0.1 %

New Jersey Right To Know

Dimethyl siloxane, hydroxy-terminated	70131-67-8	70 - 90 %
Distillates (petroleum), hydrotreated middle	64742-46-7	5 - 10 %
Silicon dioxide	7631-86-9	5 - 10 %
Carbon black	1333-86-4	0.1 - 1 %

California Prop 65

WARNING! This product contains a chemical known in the State of California to cause cancer.

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Cobalt titanite green spinel

68186-85-6

The ingredients of this product are reported in the following inventories:

IECSC : All ingredients listed or exempt.
DSL : This product contains one or more substances which are not on the Canadian Domestic Substances List (DSL). Import of this product into Canada has volume limitations. For volume limits please consult Dow Corning Regulatory Compliance.
REACH : Consult your local Dow Corning office.
TSCA : All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

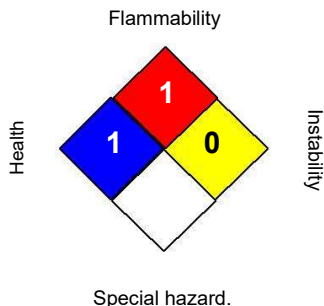
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), NECSI (Taiwan), TSCA (USA)

Section 16 - OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits
OSHA P0 : USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA : 8-hour, time-weighted average
NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST : STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday

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OSHA P0 / TWA : 8-hour time weighted average
OSHA Z-1 / TWA : 8-hour time weighted average
OSHA Z-3 / TWA : 8-hour time weighted average

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8