

CHO-BOND® 2165 Part A

SDS No: PHC-060 EU

SDS Revision Date (dd/mm/yyyy): 18/11/2015

Page 1 of 15

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier : **CHO-BOND® 2165 Part A**
Product Code(s) : 50-01-2165-0000; 50-02-2165-0000; 50-04-2165-0000; 50-05-2165-0000
SDS No. : PHC-060 EU

1.2 Relevant identified uses of the substance or mixture and uses advised against
: Conductive, solvent-based, fluoropolymer sealant.
Use pattern: professional use
No restrictions on use known.

1.3 Details of the supplier of the safety data sheet:

Parker Hannifin France

SAS-Etablissement de Saint Ouen l'Aumone-PA du vert
Galant-6/8 avenue du Vert
Galant-95310 Saint Ouen l'Aumone-France

Chomerics Europe
Parker Hannifin Ltd., Seal Group
Unit 6 Century Point
Halifax Road, High Wycombe
Bucks, HP12 3SL
United Kingdom

E-Mail: parker.france@parker.com
Website: www.parkerfrance.fr

Telephone : +33 (01) 34 32 39 00 (France); +44 (0) 1494 455 400 (UK)

1.4 Emergency Telephone Number
: 001-352-323-3500 (INFOTRAC - U.S.)

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Brown liquid. Solvent odour.

Most important hazards:

Flammable liquid and vapour. May be ignited by open flame.
Causes serious eye irritation. Repeated exposure may cause skin dryness or cracking. Occupational exposure to the substance or mixture may cause adverse effects. For further information, please refer to section 11 of the SDS.
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. See Section 12 for more environmental information.

This mixture is classified as hazardous in accordance with Regulation (EC) No 1272/2008. Classification:

Flammable liquid - Category 3; H226
Eye damage/irritation - Category 2; H319
EUH066

2.2 Label elements

Hazard pictogram(s)



CHO-BOND® 2165 Part A

SDS No: PHC-060 EU

SDS Revision Date (dd/mm/yyyy): 18/11/2015

Page 2 of 15

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

Signal word:

Warning!

Hazard statements:

H226 - Flammable liquid and vapour.
 H319 - Causes serious eye irritation.

Precautionary statements:

P210 - Keep away from heat, sparks and open flame. - No smoking.
 P280 - Wear protective gloves and eye/face protection.
 P337 + P313 - If eye irritation persists, get medical advice/attention.
 P370 + P378 - In case of fire: Use carbon dioxide, dry sand, dry chemical or alcohol-resistant foam to extinguish.
 P403 + P235 - Store in a well-ventilated place. Keep cool.
 P501 - Dispose of contents/container in accordance with local regulation.

Supplemental Hazard Statements:

EUH066 - Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

Other hazards which do not result in classification:

Burning produces obnoxious and toxic fumes. May slowly hydrolyze in the presence of water to: acetic acid; Butan-1-ol. Acetic acid is harmful. Butan-1-ol is harmful. Upon completion of the curing process, these hydrolysis products are no longer released. Mild respiratory irritant May cause central nervous system effects. Inhalation of fumes may result in metal fume fever, a flu-like illness. May cause gastrointestinal irritation. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.

PBT assessment:

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Chemical nature - Mixture of: Inorganic substances in powdered form; Esters; Silica; Hydrocarbons; Fluoropolymer; Aromatic triazole.

The following substances shall be indicated according to legislation:

Chemical name	CAS #	EC No.	Concentration	CLP Classification
Copper	7440-50-8	231-159-6	65.0 - 75.0	Not hazardous. Substances for which there are Community workplace exposure limits.
Xylene	1330-20-7	215-535-7	3.0 - 7.0	Flam. Liq. 3; H226 *Acute Tox. 4; H312 *Acute Tox. 4; H332 Skin Irrit. 2; H315
Isophthalic acid, oligomeric reaction products with adipic acid, hexane-1,6-diol, phthalic anhydride and propylidynetrimethanol	72259-84-8	500-250-5	3.0 - 7.0	No information available.
Silver	7440-22-4	231-131-3	1.0 - 5.0	Not hazardous. Substances for which there are Community workplace exposure limits.
Aromatic triazole	Proprietary	Proprietary	1.0 - 2.0	Eye Dam. 1; H318 (Supplier's classification)

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

n-Butyl acetate	123-86-4	204-658-1	1.0 - 2.0	Flam. Liq. 3; H226 STOT SE 3; H336 EUH066
-----------------	----------	-----------	-----------	---

Note:

*The above CLP Acute toxicity Classifications for the following chemicals are 'Minimum Classifications': Xylene.

For the full text of the H phrases not mentioned in this Section or in Section 2, see Section 16.

SECTION 4. FIRST-AID MEASURES

4.1 Description of first aid measures

- Ingestion* : Do not induce vomiting. Never give anything by mouth to a person who is unconscious or is having convulsions. When symptoms persist or in all cases of doubt, seek medical advice.
- Inhalation* : Move to fresh air in case of accidental inhalation of vapours. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing stops, provide artificial respiration. When symptoms persist or in all cases of doubt, seek medical advice.
- Skin contact* : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If irritation or symptoms develop, seek medical attention. Wash contaminated clothing before re-use.
- Eye contact* : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

- : Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Mild respiratory irritant. Symptoms may include coughing, mucous production and difficulty breathing. In extremely high concentrations, may also cause nausea, vomiting, dizziness, drowsiness and other symptoms of central nervous system depression. Inhalation of fumes may result in metal fume fever, a flu-like illness. Symptoms of metal fume fever may include fever, fatigue, vomiting, muscle aches and shortness of breath.
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).
Repeated exposure may cause skin dryness or cracking.
Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.

4.3 Indication of any immediate medical attention and special treatment needed

- : Provide general supportive measures and treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

- : Carbon dioxide (CO₂); Dry chemical; Alcohol resistant foam.

Unsuitable extinguishing media

- : Do not use water jet, as this may spread burning material.

5.2 Special hazards arising from the substance or mixture

- : Flammable liquid and vapour. May be ignited by open flame.
May slowly hydrolyze in the presence of water to: acetic acid; Butan-1-ol. Upon completion of the curing process, these hydrolysis products are no longer released. Vapours are heavier than air and may spread along floors. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Burning produces obnoxious and toxic fumes. In the event of fire the following can be released: Carbon oxides; Metal oxides; Hydrocarbons; Aldehydes; Hydrogen chloride; Hydrogen fluoride; formaldehyde.

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

5.3 Advice for firefighters

Protective equipment for fire-fighters

- : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Special fire-fighting procedures

- : Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

- : Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Wear appropriate protective equipment.

6.2 Environmental precautions

- : Prevent product from entering drains, sewers, waterways and soil. Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

- : Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Use only non-sparking tools. Use inert, non-combustible absorbents to assist the pick up of material. Do not use combustible absorbents, such as sawdust. Pick up and transfer to properly labeled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Contact the proper local authorities.

6.4 Reference to other sections

- : Refer to protective measures listed in sections 7 and 8. Refer to Section 13 for disposal of contaminated material.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

- : Use with adequate ventilation. Wear suitable protective equipment during handling. Wear protective gloves and eye/face protection. Avoid breathing vapors, fumes or dust. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks and open flame. - No smoking. Ground/Bond container and receiving equipment. Use explosion-proof electrical and ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep away from incompatibles. Keep containers tightly closed when not in use. Wash thoroughly after handling. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

7.2 Conditions for safe storage, including any incompatibilities

- : Store in cool/well-ventilated place. Inspect periodically for damage or leaks. No smoking. Have appropriate fire extinguishers and spill clean-up equipment in or near storage area. Do not store near any incompatible materials (see Section 10).

7.3 Specific end use(s)

- : Sealant

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Exposure Limits:			
Chemical Name	Exposure Limits	Type	Notes
Aromatic triazole	No information available.	European Union (OEL)	None.

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

Copper	1 mg/m ³ ; 0.1 mg/m ³ (Respirable dust) (TWA)	Finland (OEL)	None.
	0.2 mg/m ³ (fumes); 1 mg/m ³ (dust) (TWA) 2 mg/m ³ (dust) (STEL)	France (OEL)	None.
	1 mg/m ³ ; 0.1 mg/m ³ (fumes) (TWA) 4 mg/m ³ ; 0.4 mg/m ³ (fumes) (STEL)	Hungary (OEL)	None.
	0.2 mg/m ³ (fumes); 1 mg/m ³ (dust) (TWA)	Spain (OEL)	None.
	0.2 mg/m ³ (fumes); 1 mg/m ³ (dust) (TWA) 2 mg/m ³ (dust) (STEL)	The United Kingdom (The United Kingdom (WELs))	None.
	Isophthalic acid, oligomeric reaction products with adipic acid, hexane-1,6-diol, phthalic anhydride and propylidynetrimehanol		European Union (OEL)
n-Butyl acetate			
	150 ppm (720 mg/m ³) (TWA) 200 ppm (960 mg/m ³) (STEL)	Finland (OEL)	None.
	150 ppm (710 mg/m ³) (TWA) 200 ppm (940 mg/m ³) (STEL)	France (OEL)	None.
	950 mg/m ³ (TWA) 950 mg/m ³ (STEL)	Hungary (OEL)	None.
	200 mg/m ³ (TWA) 950 mg/m ³ (STEL)	Poland (OEL)	None.
	150 ppm (724 mg/m ³) (TWA) 200 ppm (965 mg/m ³) (STEL)	Spain (OEL)	None.
	150 ppm (724 mg/m ³) (TWA) 200 ppm (966 mg/m ³) (STEL)	The United Kingdom (The United Kingdom (WELs))	None.
Silver	0.1 mg/m ³ (TWA)	European Union (OEL)	None.
	0.1 mg/m ³ (TWA)	Finland (OEL)	None.
	0.1 mg/m ³ (TWA)	France (OEL)	None.
	0.1 mg/m ³ (inhalable) (TWA)	Germany (OEL)	(exposure factor 8)
	0.1 mg/m ³ (TWA) 0.4 mg/m ³ (STEL)	Hungary (OEL)	None.
	0.1 mg/m ³ (TWA)	Italy (OEL)	None.
	0.05 mg/m ³ (TWA)	Poland (OEL)	None.
	0.1 mg/m ³ (TWA)	Spain (OEL)	None.
	0.1 mg/m ³ (TWA)	The United Kingdom (The United Kingdom (WELs))	None.
Xylene	50 ppm (221 mg/m ³) (TWA) 100 ppm (442 mg/m ³) (STEL)	European Union (OEL)	Possibility of significant uptake through the skin
	50 ppm (220 mg/m ³) (TWA) 100 ppm (440 mg/m ³) (STEL)	Finland (OEL)	Potential for cutaneous absorption

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

50 ppm (221 mg/m ³) (TWA) 100 ppm (442 mg/m ³) (STEL)	France (OEL)	Risk of cutaneous absorption
100 ppm (440 mg/m ³) (exposure factor 2) (TWA)	Germany (OEL)	Skin notation
221 mg/m ³ (TWA) 442 mg/m ³ (STEL)	Hungary (OEL)	Potential for cutaneous absorption
50 ppm (221 mg/m ³) (TWA) 100 ppm (442 mg/m ³) (STEL)	Italy (OEL)	Skin - Potential for cutaneous absorption
100 mg/m ³ (TWA)	Poland (OEL)	Skin notation
50 ppm (221 mg/m ³) (TWA) 100 ppm (442 mg/m ³) (STEL)	Spain (OEL)	Skin - Potential for cutaneous absorption
50 ppm (220 mg/m ³) (TWA) 100 ppm (441 mg/m ³) (STEL)	The United Kingdom (The United Kingdom (WELs))	Potential for cutaneous absorption

Biological Exposure Indices:

France. *Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065)*

Xylene (CAS # 1330-20-7)

1500 mg/g Creatinine, Determinant: Methylhippuric acid, Specimen: Urine

Finland. *HTP-arvot, App 2., Biological Limit Values, (BRA/BGV), Social Affairs and Ministry of Health*

Xylene (CAS # 1330-20-7)

5 mmol/L, Determinant: Methylhippuric acid, Specimen: Urine

Germany. *TRGS 903, BAT List (Biological Limit Values)*

Xylene (CAS # 1330-20-7)

1.5 mg/L, Determinant: Xylene, Specimen: Blood

2000 mg/L, Determinant: Methylhippuric(tolur-) acid, Specimen: Urine

Hungary. *Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices*

Xylene (CAS # 1330-20-7)

1500 mg/g Creatinine, Determinant: Methylhippuric acid, Specimen: Urine

860 µmol/mmol Creatinine, Determinant: Methylhippuric acid, Specimen: Urine

Spain. *Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4*

Xylene (CAS # 1330-20-7)

1 g/g Creatinine, Determinant: Methylhippuric acid, Specimen: Urine

UK. *EH40 Biological Monitoring Guidance Values (BMGVs)*

Xylene (CAS # 1330-20-7)

650 mmol/mol Creatinine, Determinant: Methylhippuric acid, Specimen: Urine

Derived No Effect Level (DNEL): No information available.

Predicted No Effect Concentration (PNEC): No information available.

8.2 Exposure controls

Ventilation and engineering measures

- : Provide adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Use explosion-proof electrical and ventilating equipment. In case of insufficient ventilation wear suitable respiratory equipment.

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

- Respiratory protection** : 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. Advice should be sought from respiratory protection specialists.
- Skin protection** : Wear protective gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it. Wear suitable protective clothing. Depending on conditions of use, an impervious apron should be worn.
- Eye / face protection** : Wear eye/face protection. Wear as appropriate: Safety glasses with side shields; Tightly fitting safety goggles. A full face shield may also be necessary. See also EN 166.
- Other protective equipment** : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.
- General hygiene considerations** : Avoid breathing dust, fume or vapors. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- Appearance** : Brown liquid.
- Odour** : Solvent odor.
- Odour threshold** : No information available.
- pH** : No information available.
- Flash point** : 29°C (based on ingredients)
- Flashpoint (Method)** : closed cup
- Lower flammable limit (% by vol.)** : 1% (based on ingredients)
- Upper flammable limit (% by vol.)** : 7% (based on ingredients)
- Flammability (solid, gas)** : Not applicable.
- Auto-ignition temperature** : No information available.
- Decomposition temperature** : No information available.
- Oxidizing properties** : None known.
- Explosive properties** : Not explosive
- Initial boiling point and boiling range** : No information available.
- Melting/Freezing point** : No information available.
- Relative density** : 2.75
- Solubility in water** : insoluble
- Other solubility(ies)** : No information available.
- Vapour pressure** : No information available.
- Vapour density** : Heavier than air.
- Partition coefficient: n-octanol/water** : No information available.

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

- Viscosity** : No information available.
Evaporation rate (BuAe = 1) : No information available.

9.2 Other Information

- Volatiles (% by weight)** : < 10%
Volatile organic Compounds (VOC's) : 200.4 g/L
Other physical/chemical comments : No additional information.

SECTION 10. STABILITY AND REACTIVITY

- 10.1 Reactivity** : Not normally reactive. May slowly hydrolyze in the presence of water to: acetic acid; Butan-1-ol. Upon completion of the curing process, these hydrolysis products are no longer released.
- 10.2 Chemical stability** : Stable under normal conditions.
- 10.3 Possibility of hazardous reactions** : Hazardous polymerization does not occur.
- 10.4 Conditions to avoid** : Direct sources of heat. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials.
- 10.5 Incompatible materials** : Strong oxidizing agents; Strong acids; Halogenated compounds; Reactive metals; Water
- 10.6 Hazardous decomposition products** : None known.
Burning produces obnoxious and toxic fumes. In the event of fire the following can be released: Carbon oxides; Metal oxides; Hydrocarbons; Aldehydes; Hydrogen chloride.; Hydrogen fluoride; formaldehyde.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

- Acute toxicity** : According to the classification criteria of the European Union, this product is not considered as being an acutely toxic chemical.
- Skin corrosion/Irritation** : According to the classification criteria of the European Union, this product is not considered as being a skin corrosive or irritant.
- Serious eye damage/irritation** : This mixture is classified as hazardous in accordance with Regulation (EC) No 1272/2008.
Classification:
Eye damage/irritation - Category 2. Causes serious eye irritation.
- Respiratory or skin sensitisation** : Not expected to be a skin or respiratory sensitizer.
- Germ cell mutagenicity** : Contains no ingredient listed as a mutagen.
- Carcinogenicity** : Contains no ingredient listed as a carcinogen.
- Reproductive toxicity** : Contains no ingredient listed as toxic to reproduction.
- STOT-single exposure** : According to the classification criteria of the European Union, this product is not expected to cause target organ toxicity through a single exposure.
- STOT-repeated exposure** : According to the classification criteria of the European Union, this product is not expected to cause target organ toxicity through repeated exposures.
- Aspiration hazard** : According to the classification criteria of the European Union, this product is not considered as being an aspiration hazard to humans.

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

Toxicological data : No data is available on the product itself. The calculated ATE values for this mixture are:
 ATE dermal = 20 000 mg/kg
 ATE inhalation (vapours) = 220 mg/L/4H

See below for individual ingredient acute toxicity data.

<u>Chemical name</u>	<u>LC₅₀(4hr)</u> <u>inh, rat</u>	<u>LD₅₀</u>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Copper	> 5.11 mg/L (dust) (No mortality)	> 2500 mg/kg	> 2000 mg/kg
Xylene	6350 ppm (27.6 mg/L) (vapours)	3253 mg/kg	12 180 mg/kg
Isophthalic acid, oligomeric reaction products with adipic acid, hexane-1,6-diol, phthalic anhydride and propylidynetrimehanol	No information available.	No information available.	No information available.
Silver	> 5.16 mg/L (dust) (No mortality)	> 2000 mg/kg (No mortality)	> 2000 mg/kg (No mortality)
Aromatic triazole	No information available.	3200 mg/kg (supplier)	No information available.
n-Butyl acetate	> 6867 ppm (32.6 mg/L) (vapour) 1.802 mg/L (aerosol)	10 700 mg/kg	> 5000 mg/kg

Routes of exposure : Eye contact; Skin contact; Skin Absorption; Inhalation; Ingestion

Effects of acute exposure : *Inhalation*: Mild respiratory irritant. Symptoms may include coughing, mucous production and difficulty breathing. In extremely high concentrations, may also cause nausea, vomiting, dizziness, drowsiness and other symptoms of central nervous system depression. Inhalation of fumes may result in metal fume fever, a flu-like illness. Symptoms of metal fume fever may include fever, fatigue, vomiting, muscle aches and shortness of breath.

Skin contact: Direct skin contact may cause slight or mild, transient irritation. Can be absorbed through skin.

Eye contact: Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling and blurred vision.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).

Potential Chronic Health Effects

: Repeated exposure may cause skin dryness or cracking.

Other important hazards : Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.
 May slowly hydrolyze in the presence of water to: acetic acid; Butan-1-ol. Butan-1-ol is harmful. Acetic acid is harmful.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity : No data is available on the product itself. Should not be released into the environment. This product also contains: Copper. The acute toxicity of copper to aquatic species varies drastically by the chemical form and correlates with the availability of free ionic copper. Aquatic toxicity is highly variable not only by organism but with physical and chemical characteristics of the water itself.

See the following tables for individual ingredient ecotoxicity data.

CHO-BOND® 2165 Part A

SDS No: PHC-060 EU

SDS Revision Date (dd/mm/yyyy): 18/11/2015

Page 10 of 15

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Copper	7440-50-8	No information available.	No information available.	None.
Xylene	1330-20-7	8.2 mg/L (Rainbow trout)	No information available.	None.
Isophthalic acid, oligomeric reaction products with adipic acid, hexane-1,6-diol, phthalic anhydride and propylidynetrimethanol	72259-84-8	No information available.	No information available.	None.
Silver	7440-22-4	No information available.	No information available.	None.
Aromatic triazole	Proprietary	No information available.	No information available.	No information available.
n-Butyl acetate	123-86-4	18 mg/L (Fathead minnow)	N/Av	None.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Copper	7440-50-8	No information available.	No information available.	None.
Xylene	1330-20-7	3.2 - 9.56 mg/L (Daphnia magna)	No information available.	None.
Isophthalic acid, oligomeric reaction products with adipic acid, hexane-1,6-diol, phthalic anhydride and propylidynetrimethanol	72259-84-8	No information available.	No information available.	None.
Silver	7440-22-4	No information available.	No information available.	None.
Aromatic triazole	Proprietary	No information available.	No information available.	No information available.
n-Butyl acetate	123-86-4	44 mg/L (Daphnia magna)	23 mg/L (Read-across)	None.

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

<u>Ingredients</u>	CAS No	<u>Toxicity to Algae</u>		
		<u>EC50 / 96h or 72h</u>	<u>NOEC / 96h or 72h</u>	<u>M Factor</u>
Copper	7440-50-8	No information available.	No information available.	None.
Xylene	1330-20-7	3.2 - 4.9 mg/L/72hr (Green algae)	No information available.	None.
Isophthalic acid, oligomeric reaction products with adipic acid, hexane-1,6-diol, phthalic anhydride and propylidynetrimethanol	72259-84-8	No information available.	No information available.	None.
Silver	7440-22-4	No information available.	No information available.	None.
Aromatic triazole	Proprietary	No information available.	No information available.	No information available.
n-Butyl acetate	123-86-4	675 mg/L/72hr (Green algae)	200 mg/L/72hr	None.

12.2 Persistence and degradability

- : The product itself has not been tested.
- The following ingredients are considered to be readily biodegradable: Xylene; n-Butyl acetate.
- Contains the following chemicals which are not readily biodegradable: Copper; silver.

12.3 Bioaccumulation potential

- : The product itself has not been tested. See the following data for ingredient information.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Xylene (CAS 1330-20-7)	3.12 - 3.2	50 - 58
n-Butyl acetate (CAS 123-86-4)	2.3	15.3

12.4 Mobility in soil : The product itself has not been tested.

12.5 Results of PBT and vPvB assessment

- : This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

12.6 Other Adverse Environmental effects

- : No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13. DISPOSAL CONSIDERATIONS




13.1 Waste Treatment Methods:

- Handling for Disposal** : Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8. This material and its container must be disposed of in a safe way.
- Methods of Disposal** : Empty containers may contain hazardous residues. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken for local recycling or waste disposal.
 Dispose of in accordance with the European Directives on waste and hazardous waste. Waste must be classified and labelled prior to recycling or disposal. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

SECTION 14. TRANSPORTATION INFORMATION

<i>Regulatory Information</i>	14.1 UN Number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing Group	<i>Label</i>
ADR/RID	UN1866	RESIN SOLUTION	3	III	
EU ADR/RID Classification Code	F1 - Flammable liquids having a flash-point of or below 60 °C				
EU ADR / RID Hazard Identification Number	30 - flammable liquid (flash-point between 23 °C and 60 °C, inclusive) or flammable liquid or solid in the molten state with a flash-point above 60 °C, heated to a temperature equal to or above its flash-point, or self-heating liquid.				
ADR/RID Additional information	May be shipped as Limited Quantity when transported in containers no larger than 5.0 Litres; in packages not exceeding 30 kg gross mass.				
ICAO/IATA	UN1866	Resin solution	3	III	
ICAO/IATA Additional information	Refer to the appropriate Packing Instruction, prior to shipping this material. Review all State and Operator Variations, prior to shipping this material.				
IMDG	UN1866	RESIN SOLUTION	3	III	
IMDG Additional information	May be shipped as Limited Quantity when transported in containers no larger than 5.0 Litres; in packages not exceeding 30 kg gross mass.				

14.5 Environmental hazards : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See Section 12 for more environmental information.

14.6 Special precautions for user

- : Appropriate advice on safety must accompany the package. Keep away from heat, sparks and open flame. - No smoking.

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

- : Not applicable.

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

SECTION 15. REGULATORY INFORMATION

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

- : Classification according to Regulation (EC) No. 1272/2008 on the classification of hazardous mixtures.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended:

None of the components are specifically listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended:

None of the components are specifically listed.

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances:

None of the components are specifically listed.

Directive 98/24/EC on the protection of the health and safety of workers from risks related to chemical agents at work:

Xylene (CAS # 1330-20-7)

Aromatic triazole (Proprietary)

n-Butyl acetate (CAS # 123-86-4)

Directive 94/33/EC on the protection of young people at work:

None of the components are specifically listed.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended [including Regulation (EU) 2015/830].

Follow national regulation for work with chemical agents.

German legislation on water endangering substances VwVwS: Water contaminating class (Germany): 2 (self classified)

15.2 Chemical safety assessment

- : A chemical safety assessment has not been carried out by the Manufacturer of this product.

CHO-BOND® 2165 Part A

SDS No: PHC-060 EU

SDS Revision Date (dd/mm/yyyy): 18/11/2015

Page 14 of 15

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

SECTION 16. OTHER INFORMATION

- Legend** : ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE: Acute Toxicity Estimate
CAS: Chemical Abstract Services
CLP: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
EC: European Community
EC50: Effective Concentration 50%.
EEC: European Economic Community
EN: European Standard
EU: European Union
HSDB: Hazardous Substances Data Bank
IATA: International Air Transport Association
IBC: Intermediate Bulk Container
ICAO: International Civil Aviation Organisation
IMDG: International Maritime Dangerous Goods
LC: Lethal Concentration
LD: Lethal Dose
NOEC: No observable effect concentration
OECD: Organisation for Economic Co-operation and Development
OEL: National occupational exposure limits
PEL: Permissible exposure limit
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
RTECS: Registry of Toxic Effects of Chemical Substances
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TWA: Time Weighted Average
WEL: Workplace Exposure Limit
- Information Source** : 1. Material Safety Data Sheet from manufacturer.
2. Canadian Centre for Occupational Health and Safety, CCIInfoWeb Databases, 2015 (Chempendium, RTECs, HSDB, INCHEM).
3. European Chemicals Agency, Classification Legislation, 2015.
4. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2015
- Preparation Date (dd/mm/yyyy)** : 11/08/2015
- Reviewed Date SDS (dd/mm/yyyy)** : 18/11/2015
- Revision No.** : 2
- Revision Information** : Minor formatting change.
- H-Phrases (Full text)** : H226 - Flammable liquid and vapour.
H312 - Harmful in contact with skin.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H336 - May cause drowsiness or dizziness.
EUH066 - Repeated exposure may cause skin dryness or cracking.
- Other special considerations for handling** : Provide adequate information, instruction and training for operators.



Parker Hannifin France
SAS-Etablissement de Saint Ouen l'Aumone-PA du vert
Galant-6/8 avenue du Vert
Galant-95310 Saint Ouen l'Aumone-France
Telephone: +33 (01) 34 32 39 00

CHO-BOND® 2165 Part A


SDS No: PHC-060 EU

SDS Revision Date (dd/mm/yyyy): 18/11/2015

Page 15 of 15

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

<p>Prepared for: Parker Hannifin Corp. 77 Dragon Court Woburn, MA, USA 01888 Telephone: 001-781-935-4850 http://www.parker.com Direct all enquiries to Parker Hannifin.</p>	
<p>Prepared by: ICC The Compliance Center Inc. http://www.thecompliancecenter.com</p>	

DISCLAIMER

This Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by Parker Hannifin Corporation and CCOHS' Web Information Service. The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Parker Hannifin Corporation expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Parker Hannifin Corporation.

END OF DOCUMENT