



DOUBLE BOND CHEMICAL IND. CO., LTD
SAFETY DATA SHEET

In accordance with Regulation (EC) 1907/2006 (REACH), Annex II-Europe

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

1.1 Product identifier:

Substance name: CHINOX® 168
Other name: CN 168
CAS No.: 31570-04-4
EC No.: 250-709-6
REACH Registration No.: 01-2119491176-33-XXXX
Recommended use of the chemical and restrictions on use: Antioxidant for the polymer industry
Industrial;

1.2 Manufacturer or supplier information

Company name: Double Bond Chemical Ind. Co., Ltd.
Address: 4F, 959, JUNGJENG RD., JUNGHE DISTRICT,
NEW TAIPEI CITY, TAIWAN, R.O.C
Emergency contact person: Jenny Chen
Emergency phone/ fax number: +886-2-8228-1168/ +886-2-8228-1818
Emergency contact Email: techdata@dbc.com.tw

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

2.1.1 Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified as hazard substance

2.1.2 Additional information

No further information

2.2 Label elements:

Symbols: No symbol

Signal word: No Signal word

Hazard substance: Not classified as hazard substance.

Hazard statement: No Hazard statements.

Precautionary statements: No precautionary statements.

2.3 Other hazards:

None to our knowledge.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Information about substances:

Chemical name	CAS No.	EC No.	Weight % content	REACH Registration No.	Classification according to Regulation (EC) No 1272/2008
tris(2,4-ditert-butylphenyl) phosphite	31570-04-4	250-709-6	≥ 99%	01-2119491176-33-XXXX	Not classified as hazard substance

4. FIRST-AID MEASURES

Eye contact:	Immediately wash eyes with plenty of running water for at least 15 minimum. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. Occasionally lift the upper and lower eyelids. Seek medical advice if irritation develops and persists.
Skin contact:	Wash affected skin area with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Seek medical advice if irritation develops and persists.
Ingestion:	Seek medical advice if the victim feels unwell. Wash out mouth with plenty of water and give 2-4 cupfuls of water or milk to drink. Never give anything by mouth to an unconscious person. Do not induce vomiting.
Inhalation:	Remove the victim from exposure into fresh air if adverse effects (e.g. dizziness, drowsiness or respiratory irritation) occur. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice if cough or other symptoms appear.
The most important symptoms and hazardous effects:	See Section 11 for more detailed information on effects and symptoms

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Water fog or fine spray, dry chemical fire, carbon dioxide extinguishers and foam; alcohol resistant foam (ACT type) are preferred; general purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
Unsuitable extinguishing media:	Direct water stream
Exposure hazards (combustion products):	Combustion products may include and are not limited to: Carbon monoxide, carbon dioxide, and phosphorous oxides.
Unusual Fire and Explosion Hazards:	Container may rupture from gas generation in a fire situation. Vapours are heavier than air and may travel a long distance and accumulate in low lying areas.
Special protective equipment for firefighters:	Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.
Special methods/instructions:	Keep people away. Isolate fire and deny unnecessary entry. Stay up wind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Eliminate ignition sources. Move container from fire area if this is possible

SAFETY DATA SHEET

In accordance with Regulation (EC) 1907/2006 (REACH), Annex II-Europe

without hazard.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Wear appropriate personal protective equipment (see section 8) during cleaning. Avoid contact with eyes and skin. Avoid inhalation of dust. Avoid dust formation. Keep away sources of ignition.
Environmental precautions:	Prevent the material from entering surface water or sanitary sewer system. Do not discharge directly to a water source. If accidental spillage or washings enter drains or watercourses contact local Environment Agency.
Methods for cleaning up:	Pick up mechanically. Place in suitable and properly labelled waste containers for later disposal. Prevent entry into sewers and waterways. For large spills: Contain spilled material if possible.
Reference to other sections	Refer additionally to Section 8 and 13.

7. HANDLING AND STORAGE**7.1 Handling**

Personal precautions:	Prevent formation of dust. Wear personal protective equipment (see section 8). Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Avoid breathing dust. Dust can form an explosive mixture with air. Take pre-cautionary measure against static charge. Keep away from sources of heat and ignition.
Technical measures/ Precautions:	Provide good ventilation (local exhaust) of the working area, safety showers and eye wash station near the workplace. Avoid release to the environment.

7.2 Storage

Technical measures/ Storage conditions:	Keep in the original container. Keep container tightly closed in a cool, dry, well-ventilated place. Keep product away from heat, sparks, flame and other sources of ignition and out of direct sunlight and away from incompatible materials.
Incompatible products:	Strong oxidizing agents, bases and aqueous acids.

7.3 Specific end use(s)

Not relevant

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**8.1 Occupational exposure limits****8.1.1 Control parameters**

8 hours time weighted average exposure limits (TWA): No data available

8.2 Exposure controls**8.2.1 Technical measures:**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

8.2.2 Organisational measures:

SAFETY DATA SHEET

In accordance with Regulation (EC) 1907/2006 (REACH), Annex II-Europe

Only personnel who have received appropriate training and are authorized are allowed to handle the substance. Organize regular exposure monitoring to check that exposure levels of operators stay beyond the Exposure Limit. Sampling and analysis should be carried out according to accepted methods.

8.3 Personal protective equipment

Respiratory protection:	Use a properly fitted, air-purifying or air-fed respirator complying with NIOSH-approved respirator with minimum APF 10. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. Recommended: Dust mask type N95
Hand protection:	After contamination with product change the gloves immediately and dispose them off according to relevant national and local regulations Recommended: Chemical resistant protective gloves (EN 374), Protective index 6, corresponding > 480 minutes of permeation time according to EN 374
Eye protection:	Safety glasses with side-shields (frame goggles) (e.g. EN 166)
Skin and body protection:	Wear chemical-resistant protective clothing

8.4 Hygiene measures

Keep away from foodstuffs, drinks and tobacco. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

8.5 Environmental exposure controls:

Procedural and/or control technologies are used to minimize emissions and the resulting exposure during cleaning and maintenance procedures.

Transfer waste gases to a combustion unit or to a powder separator.

Do not apply industrial sludge to natural soils. Sealing of all relevant soil surfaces in the facility.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White crystalline powder or granule
Odour:	Odorless
Odour threshold:	No data available
pH:	6 (1% in water, as suspension)
Melting/Freezing temperature:	184-187 °C
Initial boiling point and boiling range:	Not applicable
Flash-point:	Not applicable
Evaporation rate:	No data available
Flammability (solid, gas):	non flammable
Upper/lower flammability or explosive limits:	No data available
Vapour pressure:	8.5 x 10 ⁻¹⁰ Pa @20°C
Vapour density:	No data available
Relative density:	1.02 g/cm ³ @20°C
Solubility(ies):	Water: < 0.005 mg/l @20°C

Partition coefficient of n-octanol/water (log Pow):	> 6 (calculated)
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions and recommended use.
Conditions to be avoided:	Static discharges. Keep product away from heat, sparks, flame and other sources of ignition. Avoid direct sunlight and UV light
Materials to avoid:	Strong oxidizing agents, bases and strong acids.
Hazardous polymerization	Will not occur
Hazardous decomposition products:	Thermal decomposition and burning may produce carbon oxides, phosphorous oxides and other toxic gases and vapors

11. TOXICOLOGICAL INFORMATION

Routes of exposure:	Skin, inhalation, ingestion, eyes.
ACUTE TOXICITY	
Acute oral toxicity, LD50:	> 6000 mg/kg bw (RAT)
Acute dermal toxicity, LD50:	> 2000 mg/kg bw (RAT)
Acute inhalation toxicity, LC50:	No data available
LOCAL EFFECTS	
Skin irritation:	Not irritating
Eye irritation:	Not irritating
Skin sensitization:	Not sensitising
OTHER	
Repeated dose toxicity:	No data available
Genetic toxicity:	Negative
Reproductive toxicity:	No data available
Carcinogenicity:	No data available.

12. ECOLOGICAL INFORMATION

ACUTE TOXICITY-Short-term toxicity	
LC0-Fish-96h:	≥ 100 mg/l (Brachydanio rerio)
IC50-Bacteria-3h:	> 100 mg/l (Activated sludge)
EC50-Algae-72h:	> 75.2 mg/l (Scenedesmus sp.)
EC50-Invertebrate-24h:	510 mg/l (Daphnia magna) (calculated); 21d-NOELR: ≥ 2 mg/l



OTHER

Biodegradation: Not biodegradable
Bioaccumulation No data available
Results of PBT and vPvB assessment: No data available

13. DISPOSAL CONSIDERATIONS

Waste from residues: Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required. Do not dump into any sewers, on the ground, or into any body of water.

Container: Containers should be cleaned by appropriate method and then re-used or disposed by landfill or incineration as appropriate, in accordance with local and national regulations. Do not remove label until container is thoroughly cleaned.

14. TRANSPORT INFORMATION

United nations number (UN No.): Not classified as hazard transport goods.
Transport hazardous class: Not classified as hazard transport goods.
UN Proper shipping name: Not classified as hazard transport goods.
Marine pollutant (YES/NO): Not classified as hazard transport goods.
ADR/RID: Not classified as hazard transport goods.
IMDG/IMO: Not classified as hazard transport goods.
IATA/ICAO: Not classified as hazard transport goods.
Specific transport measures and precautionary conditions: Not classified as hazard transport goods.

15. REGULATORY INFORMATION

HMIS Classification

Health Hazard: 1 Flammability: 0 Physical Hazards: 0 Personal Protection: F

NFPA Classification

Health Hazard: 1 Flammability: 0 Instability: 0

EPCRA

- Section 302 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.

CERCLA Hazardous Substances:

Substance is not listed.

CAA 112(r) Regulated Chemicals For Accidental Release Prevention:

Substance is not listed.

Proposition 65

- Chemicals known to cause cancer: Substance is not listed.
- Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- Chemicals known to cause reproductive toxicity for males: Substance is not listed.



DOUBLE BOND CHEMICAL IND. CO., LTD
SAFETY DATA SHEET

In accordance with Regulation (EC) 1907/2006 (REACH), Annex II-Europe

· Chemicals known to cause developmental toxicity: Substance is not listed.

Chemical Inventories

Australia - AICS

Canada - DSL

China - IECSC

USA - TSCA

Philippines – PICCS

New Zealand-NZIoC

Japan – ENCS NO.: 3-3510

Korea – ECL NO.: KE-03086

EU – EINECS NO.: 250-709-6

Taiwan - TCSI

16. OTHER INFORMATION

Shelf life	2 years after shipping date in sealed containers protected from light and air.	
Reference documents	United States Environmental Protection Agency (US EPA)	
MSDS prepared by	Company name	DOUBLE BOND CHEMICAL IND., CO., LTD.
	Address	4F, 959, JUNGJENG RD., JUNGHE DISTRICT, NEW TAIPEI CITY, 23544 TAIWAN, R.O.C
	TEL. / FAX.	+886-2-82281168 / +886-2-82281818
	Title / Name (signature)	Technical Data Supervisor / Ann Lin

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance.