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Web:www.yacoo.com.cn
E-mail:sales@yacoo.com.cn

Material Safety Data Sheet

SECTION 1:CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name：BND

Company: Suzhou YACOO Science Co., Ltd.

Address: No.128,FangZhou Road,Suzhou Industral Park,China

Tel：0512-87182055

Fax：0512-87182056

SECTION 2: Hazards identification

2.1Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 4), H302
Skin corrosion (Sub-category 1A), H314
Serious eye damage (Category 1), H318
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word	Danger
Hazard statement(s)	
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)	
P260	Do not breathe dusts or mists.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312 + P330
IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P303 + P361 + P353
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305 + P351 + P338 + P310
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

Supplemental Hazard Statements none

Reduced Labeling (<= 125 ml)
Pictogram

Signal word Danger
Hazard statement(s)
H314 Causes severe skin burns and eye damage.
Precautionary statement(s)
P260 Do not breathe dusts or mists.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305 + P351 + P338 + P310
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
Supplemental Hazard Statements none

2.3Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1Substances
Formula: C4H6BrNO4
Molecular weight: 212,00 g/mol
CAS-No.: 30007-47-7
EC-No.: 250-001-7

Component	Classification	Concentration
5-bromo-5-nitro-1,3-dioxane		
CAS-No. 30007-47-7 EC-No. 250-001-7	Acute Tox. 4; Skin Corr. 1A; Eye Dam. 1; Aquatic Acute 1; Aquatic Chronic 1; H302, H314, H318, H400, H410 Concentration limits: > 0,1 %: 2, H315; > 0,1 %: Eye Irrit. 2, H319; M-Factor - Aquatic Acute: 1 M-Factor - Aquatic Chronic: 1	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures
4.1Description of first-aid measures
General advice
Consult a physician. Show this material safety data sheet to the doctor in attendance.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
4.3Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures
5.1Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
5.2Special hazards arising from the substance or mixture
Carbon oxides
Nitrogen oxides (NOx)
Hydrogen bromide gas
Combustible.
5.3Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.
5.4Further information
No data available

SECTION 6: Accidental release measures
6.1Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.
6.2Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
6.3Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
6.4Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage
7.1Precautions for safe handling Advice on safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Advice on protection against fire and explosion
Provide appropriate exhaust ventilation at places where dust is formed.
Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
For precautions see section 2.2.
7.2Conditions for safe storage, including any incompatibilities Storage conditions
Keep container tightly closed in a dry and well-ventilated place. Store in cool place.
7.3Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection
8.1Control parameters
Ingredients with workplace control parameters
8.2Exposure controls
Personal protective equipment
Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full- face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties
9.1Information on basic physical and chemical properties
a)Appearance Form: solid
b)Odor No data available
c)Odor Threshold No data available
d)pH No data available
e)Melting point/freezing point Melting point: 59 ° C at 1.013,25 hPa - OECD Test Guideline 102
f)Initial boiling point and boiling range 185,2 ° C at 200 hPa - OECD Test Guideline 103
g)Flash point No data available
h)Evaporation rate No data available
i)Flammability (solid, gas)
The product is not flammable. - Test N.1: Test method for readily combustible solids
j)Upper/lower flammability or explosive limits No data available
k)Vapor pressure 0,34 hPa at 50 ° C - OECD Test Guideline 104
l)Vapor density No data available
m)Relative density 1,96 at 20 ° C - OECD Test Guideline 109
n)Water solubility 4,77 g/l at 20 ° C - OECD Test Guideline 105
o)Partition coefficient: n-octanol/water
log Pow: 1,6 at 23 ° C - OECD Test Guideline 117 - Bioaccumulation is not expected.
p)Autoignition temperature No data available
q)Decomposition temperature No data available
r)Viscosity Viscosity, kinematic: No data available Viscosity, dynamic: No data available
s)Explosive properties No data available
t)Oxidizing properties No data available

9.2Other safety information
Surface tension 71 mN/m at 1g/l at 20 ° C
- OECD Test Guideline 115

SECTION 10: Stability and reactivity
10.1Reactivity
No data available

10.2Chemical stability
Stable under recommended storage conditions.
10.3Possibility of hazardous reactions
No data available
10.4Conditions to avoid
No data available
10.5Incompatible materials
Strong oxidizing agents
10.6Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information
11.1Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - male - 455 mg/kg (OECD Test Guideline 401)
Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Behavioral:Tremor. Behavioral:Convulsions or effect on seizure threshold. Behavioral:Excitement.
Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Skin corrosion/irritation
Skin - reconstructed human epidermis (RhE)
Result: Causes severe burns.
(OECD Test Guideline 431)

Serious eye damage/eye irritation
Eyes - Bovine cornea
Result: Causes burns. - 4 h
(OECD Test Guideline 437)
Causes serious eye damage.

Respiratory or skin sensitization
Germ cell mutagenicity
Carcinogenicity
IARC:No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity
Specific target organ toxicity - single exposure

Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract
Specific target organ toxicity - repeated exposure
Aspiration hazard

11.2Additional Information
Repeated dose toxicity - Rat - male and female - Oral - 14 Weeks - NOAEL (No observed adverse effect level) - 50 mg/kg
RTECS: JG9650000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
After absorption:

muscle twitching
agitation

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information
12.1Toxicity
No data available

Toxicity to daphnia and other aquatic invertebrates

static test EC50 - Daphnia magna (Water flea) - 1,32 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata - 0,265 mg/l - 72 h (OECD Test Guideline 201) static test EC10 - Pseudokirchneriella subcapitata - 0,088 mg/l - 72 h (OECD Test Guideline 201)

12.2Persistence and degradability

Biodegradability	erobic - Exposure time 7 d Result: 0 % - Not readily biodegradable. (OECD Test Guideline 301D)

12.3Bioaccumulative potential
12.4Mobility in soil
12.5Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
12.6Other adverse effects

Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

14.1UN number

ADR/RID: 326 1IMDG: 3261 IATA: 3261

14.2UN proper shipping name

ADR/RID: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (5-bromo-5-nitro-1,3-dioxane)

IMDG:CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (5-bromo-5-nitro-1,3-dioxane)

IATA:Corrosive solid, acidic, organic, n.o.s. (5-bromo-5-nitro-1,3-dioxane)

14.3Transport hazard class(es)

ADR/RID: 8 IMDG: 8 IATA: 8

14.4Packaging group

ADR/RID: III IMDG: III IATA: III

14.5Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: no

14.6Special precautions for user

No data available

SECTION 15: Regulatory information

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

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	: ENVIRONMENTAL HAZARDS

15.2Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

SECTION 16:OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.