

ESH196A - Hazard Communication Update

Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

GHS SDS Example

From the OSHA Guide to a Globally Harmonized System of Classification and Labeling of Chemicals
<https://www.osha.gov/dsg/hazcom/qhs.html>

Bondit

(Fictional Product)

1. Identification

Name of the product: Bondit
Recommended use: General adhesive.
Producer:
GHS Ltd., UK -
London, SE, Southwarkbridge 1

Telephone no. +44 171717 555.555 5,
Emergency no. +44 171717 333 333 3

2. Hazard(s) identification

Classification:
Flammable liquid, Category 2
Eye irritation, Category 2A
Hazardous to the aquatic environment, Acute Category 3

Labeling:

Symbol: Flame, Exclamation mark
Signal word: Danger
Hazard statement:
Highly flammable liquid and vapour.
Causes severe eye irritation.
Harmful to aquatic life.
Precautionary statements:
Keep container tightly closed.
Keep away from heat/sparks/open flame. - No smoking.
Wear protective gloves and eye/face protection.
Ground/Bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/ equipment.
Take precautionary measures against static discharge.
Use only non-sparking tools.
Store in cool/well-ventilated place.
Avoid release to the environment.

3. Composition / Information on ingredients

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Chemical identity: Component A 70-80%
Common name: Solvent A
Numbers of identity: CAS-Nr.:111111-11-1
Impurities: None

Chemical identity: Component C 20-25%
Common name: Not applicable
Numbers of identity: CAS-Nr.: 44444-44-4
Impurities: none

4. First-aid measures

Inhalation:

Remove person to fresh air. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, give artificial respiration.

Skin contact:

Wash the contaminated area with soap and water. Remove contaminated clothing and wash before reuse. If irritation develops, get medical attention.

Eye contact:

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion:

If swallowed, do NOT induce vomiting. Seek immediate medical attention.

5. Firefighting measures

Suitable extinguishing media: Foam, extinguishing powder, carbon dioxide, water fog. In case of fire, cool endangered containers with water fog.

Unsuitable extinguishing media: High pressure water jet.

Specific hazards in case of fire: None are known.

Special protective equipment and precaution for fire fighters: For fires in enclosed areas, wear self-contained breathing apparatus. Do not inhale combustion gases.

6. Accidental release measures

Personal precautions:

Depending on extent of release, consider the need for fire fighters/emergency responders with adequate personal protective equipment for cleaning up.

Do not eat, drink or smoke while cleaning up. Use a self-contained respirator, a mask with filter (type A class 3) or a filtering mask (e.g., EN 405). Wear protective clothing, safety glasses and impervious gloves

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(e.g., neoprene gloves). Ensure adequate ventilation. Avoid all sources of ignition, hot surfaces and open flames (see also Section 7).

Environmental precautions:

Prevent spills from entering storm sewers or drains and contact with soil.

Methods and materials for containment and cleaning up:

Eliminate all ignition sources. Runoff may create fire or explosion hazard in sewer system. Absorb on fire retardant, liquid-absorbing material (treated sawdust, diatomaceous earth, sand). Shovel up and dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal (see also Section 13).

7. Handling and storage

Precautions for safe handling:

Avoid contact with eyes. Avoid prolonged repeated skin contact and breathing mists/vapours.

Use in well-ventilated area away from all ignition sources. Switch off all electrical devices such as parabolic heaters, hotplates, storage heaters etc. in good time for them to have cooled down before commencing work. Do not smoke; do not weld. Do not empty waste into sanitary drains. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage, including incompatibilities:

Storage containers must be grounded and bonded. Store away from all ignition sources in a cool area equipped with an automatic sprinkling system. Ensure adequate ventilation. Store at temperatures between +5 and +50°C. Store only in the original container.

8. Exposure controls / personal protection

Information on the system design:

Draw off vapours directly at the point of generation and exhaust from the work area. In the case of regular work, provide bench-mounted extraction equipment.

Exposure Limits:

Component Name (CAS-No.)	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
	UK OEL	500	1200	--	--
Component C (4444-44-4)	German MAK	200	950	--	--

Ventilation:

Use in well-ventilated area with local exhaust.

Respiratory protection:

Approved respiratory equipment must be used when airborne concentrations are unknown or exceed

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the exposure limits. When processing large amounts, use a light duty construction compressed air line breathing apparatus (e.g., in accordance with EN1835), a mask with filter (type A class 3, colour brown) or a filtering half mask (e.g., in accordance with EN 405) when there is inadequate ventilation.

Eye protection:

Safety glasses with side shields or chemical goggles must be worn.

Skin protection:

If prolonged or repeated skin contact is likely, neoprene gloves should be worn. Good personal hygiene practices should always be followed.

9. Physical and chemical properties

Physical state: Liquid

Colour: Colourless, transparent

Odour: Solvent, ester-like

Odour threshold: Not available

pH-value: Not applicable

Melting point: Not available

Freezing Point: Not available

Initial boiling point: 56°C

Flash point: - 22°C DIN 51755

Evaporation rate: Not available

Flammability (solid, gas): Not applicable

Explosion limits: lower limit = 1.4 Vol%; upper limit 13.0 Vol% (literature)

Vapour pressure: 240 mbar (highest partial vapour pressure) at 20°C

Vapour density: Not available

Relative density: 0.89 g/cm³ at 20°C

Solubility: Partially soluble in water at 20°C

Partition coefficient: Log Kow = 3.3

Auto-ignition temperature: Not available

Decomposition temperature: Not available

10. Stability and reactivity

Chemical stability: No decomposition, if used according to specifications.

Possibility of hazardous reactions: None are known.

Conditions to avoid: Heat, sparks, flame and build up of static electricity.

Materials to avoid: Halogens, strong acids, alkalies and oxidizers.

Hazardous decomposition products: None are known.

11. Toxicological information

Acute Toxicity:

Test	Results	Basis
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Oral Toxicity (Rats)	Not Classified	Based on Ingredients
Dermal Toxicity (Rats)	Not Classified	Product Test Data
Inhalation Toxicity, Vapor (Rats)	Not Classified	Based on Testing of Similar Materials
Eye Irritation (Rabbits)	Eye Irritant Category 2A	Based on Testing of Similar Materials
Dermal Irritation (Rabbits)	Not Classified	Product Test Data

Summary Comments: May cause severe eye irritation like ocular lesions, which are reversible.

Subchronic/Chronic Toxicity:

Test	Results	Comments
Dermal Sensitization (Guinea Pig)	Not Classified: Negative response in Bueller, guinea pig test. 0% animals considered positive.	Product Test Data

Summary Comments: Component A may have a drying effect on the skin; frequent or prolonged contact may cause flaking or cracking of the skin.

12. Ecological information

Persistence and degradability: The total of the organic components contained in the product is not classified as "readily biodegradable" (OECD-301 A-F). However, this product is expected to be inherently biodegradable.

Bio-accumulative potential: There is no evidence to suggest bioaccumulation will occur.

Mobility: Accidental spillage may lead to penetration in the soil and groundwater. However, there is no evidence that this would cause adverse ecological effects.

Aquatic Toxicity:

Test	Results	Comments
Acute Toxicity	Acute Category 3: 96 hr. LC ₅₀ = 65 mg/L	Product Test Data

13. Disposal considerations

Waste Disposal:

Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited by local regulation. The product is suitable for processing at an appropriate government waste disposal facility. Use of these methods is subject to user compliance

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with applicable laws and regulations and consideration of product characteristics at time of disposal.

Recommended European waste code (EWC): 080406

14. Transport information

UN-number: 1993

UN proper shipping name: Flammable Liquid, N.O.S. (Contains Component C)

Transport hazard class: 3

Packing group: II

Marine Pollutant: No

15. Regulatory information

Inventory Status:

All components are on TSCA, EINECS/ELINCS, AICS, and DSL.

German:

Regulations governing combustible liquids (German-VbF) class: AI

German water endangering class (WGK) = 1, slightly water-endangering product (manufacturer classification.)

Australian Regulations:

AS 1940 Class: PGII

Poisons Schedule: S5

U.S. Regulations:

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:

SARA (311/312) HAZARD CATEGORIES:

FIRE, ACUTE

SARA 313: This product contains the following SARA 313 Toxic Release Chemicals.

Chemical Name	CAS Number	Concentration
Component A	111111-11-1	70-80%
Component C	4444-44-4	20-25%

The following product components are cited on the lists below:

Chemical Name	CAS Number	List Citations
Component A	111111-11-1	NJ RTK, TSCA 12(b)
Component C	4444-44-4	Prop. 65, NJ RTK

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16. Other information

Abbreviations and acronyms:

UK OES = United Kingdom Occupational Exposure Standards

German MAK = Germany Maximum Allowable Concentration

Preparation date: July 1, 2005

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