

1. IDENTIFICATION OF PRODUCT & COMPANY

PRODUCT REFERENCE	BD563-13655B	
PRODUCT NAME	BIO – DUR TM 563 Curing Agent – White	
INTENDED USE	Anticorrosive coating component	
DETAILS OF COMPANY	THIN FILM TECHNOLOGY, Inc. 802 Utah St. South Houston, TX 77587	(USA) 713-910-6200 VOICE (USA) 713-910-6210 FAX

2. HAZARDS IDENTIFICATION**HAZARD STATEMENTS:**

H312-Harmful if in contact with skin.

H315-causes skin irritation.

H319-Irritating to eyes and skin.

H411-Toxic to aquatic organisms in unreacted condition, may cause long term adverse effects in the aquatic environment (unmixed material only – ONCE MIXED THE MATERIAL IS HARMLESS TO ENVIRONMENT.)

H334-Do not breathe vapor or spray. May cause respiratory difficulties if inhaled.

PRECAUTIONARY STATEMENTS:

P280-Wear protective gloves, eye protection and face protection etc.

P301-P315+P331

P303-P361+P352+P332:P313

P305–P338+P351

P304–P341

P273-Avoid release to the environment.(ONLY IN UNMIXED STATE)

SIGNAL WORD: WARNING

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances presenting a health or environmental hazard within the meaning of the CHIP Regulations or which are assigned Occupational Exposure Values.

Substance Name	Concentration Range (%)	S-phrases No. (*)	R-phrases No. (*)	EINECS/ ELINCS No.	CAS No.
Benzyl Alcohol	10 – 20 %	S2 – S20/21 S29/35-S24/25	R20/21/22 R41-	202 – 859 – 9	100-51-6
4,4'Methylenebiscylcohexanamine	1 – 3%	S26 – S46 S62	R42/43	217 – 168 – 8	1761-71-3
Remaining component are a trade secret, non—aromatic polyamine.	20 – 35%				

(*) for full text see Section 16

4. FIRST AID MEASURES

GENERAL	In all cases of doubt or when symptoms persist seek medical attention. Never give anything by mouth to an unconscious person.
INHALATION	Remove to fresh air, check for breathing and administer artificial respiration if necessary. Give nothing by mouth. If unconscious place in recovery position and seek medical advice. If conscious ensure the person sits or lies down. Obtain medical attention if ill effects occur.
EYE CONTACT	Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes holding the eyelids apart, seek medical advice if effects occur.
SKIN CONTACT	Remove contaminated clothing and footwear. Wash skin thoroughly with soap and water or use a proprietary skin cleanser. Do NOT use solvents or thinners. Seek medical attention if irritation persists.
INGESTION	If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. If conscious give 1 pint of fresh water to drink. If unconscious, check for breathing and give artificial respiration if necessary.

5. FIRE FIGHTING MEASURES

FLAMMABILITY CLASSIFICATION:	Combustible IIIB
FLASH POINT:	>219°F
EXTINGUISHING MEDIA:	Carbon dioxide, foam, dry chemical, water fog.
NOT RECOMMENDED:	Water jet
UNUSUAL HAZARDS:	Combustion products may include, but are not limited to: phenolics, carbon dioxide, acrolein, and carbon dioxide.
SPECIAL FIREFIGHTING PROCEDURES:	Use protective firefighting clothing and positive pressure self-contained breathing apparatus to protect against potential harmful and/or irritating fumes. Do not use high pressure water since this may spread the area of the fire.

6. ACCIDENTAL RELEASE MEASURES

Exclude sources of ignition and ventilate area. Exclude non-essential personnel. Avoid breathing vapours. Refer to protective measures listed in Sections 7 and 8. Contain and collect spillages with non-combustible absorbent materials e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container for disposal in accordance with waste regulations (see Section 13). Do not allow to enter drains or water courses. Clean preferably with a detergent, avoid use of solvents. If the product enters drains or sewers immediately contact the local water company; in the case of contamination of streams, rivers or lakes the relevant environmental agency.

Dispose of in accordance with applicable local and federal environmental control regulations.

7. STORAGE & HANDLING**HANDLING**

Provide sufficient air exchange and/or exhaust in workrooms. Ensure adequate ventilation. Handle and open container with care. When using do not eat, drink or smoke.

Pack Size	Composite gross weight does not exceed
1.4 US Gallons	15.5lb./7 Kg

STORAGE

Keep away from food, drink and animal feeding stuffs. Keep container tightly closed. Observe the label precautions. Store between 5 and 40°C in a dry well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorised access. Containers which are opened should be properly resealed and kept upright to prevent leakage. Store away from oxidising agents and strongly alkaline and acid materials. The principles contained in general guidance for storage of packaged potentially dangerous substances should be observed when storing this product.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**ENGINEERING MEASURES**

Provide additional forced ventilation if existing natural ventilation is insufficient. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of solvent vapour and/or particulates below the relevant Occupational Exposure Values, suitable respiratory protective equipment should be worn (see "Workplace Exposure Limits" below).

EXPOSURE LIMIT VALUES

Substance	TWA (1)		STEL (2)		Notations (3)
	ppm (4)	mg/m ³ (4)	ppm (4)	mg/m ³ (4)	
	None listed		None listed		

NOTES

- (1) Long Term Exposure Limit - 8 hour Time Weighted Average.
 (2) Short Term Exposure Limit - 15 minute reference period.
 (3) 'Sk' indicates a risk of absorption through the skin. 'Sen' indicates a respiratory sensitizer.
 (4) 'WEL' indicates Workplace Exposure Limit.

GENERAL PROTECTION	All personal protective equipment, including respiratory protective equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the OSHA regulations.
RESPIRATORY PROTECTION	Air fed respiratory protective equipment should be worn when sprayed if exposure of the sprayer or other people nearby cannot be controlled to below the Occupational Exposure Values and engineering methods cannot reasonably be improved.
HAND PROTECTION	When skin exposure may occur, advice should be sought from glove suppliers on appropriate types and usage times for this product. The instructions and information provided by the glove supplier on use, storage, maintenance and replacement must be followed. Barrier creams may help to protect exposed areas of skin, but are not substitutes for full physical protection. They should not be applied after exposure has occurred.
EYE PROTECTION	Eye protection designed to protect against liquid splashes should be worn.
SKIN PROTECTION	Cotton or cotton/synthetic overalls or coveralls are normally suitable. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner. Regular skin inspection of users of this product is recommended. ALWAYS WASH YOUR HANDS BEFORE EATING, SMOKING OR USING THE TOILET. See Section 12 for detailed information.

9. PHYSICAL PROPERTIES

PHYSICAL STATE:	White Liquid		
FLASH POINT:	>219°F	METHOD:	DIN 51758 (Pensky-Martins Closed Cup)
VISCOSITY:	25 – 50 Poise	METHOD:	BS3900 Part A7
SPECIFIC GRAVITY:	1.56Kgs/ Ltr.	METHOD:	BS3900 Part A19
VOC CONTENT:	Essentially zero under normal conditions.		
VAPOUR DENSITY:	N/A		
SOLUBILITY IN WATER:	Immiscible		

10. STABILITY AND REACTIVITY

Stable under the recommended storage and handling conditions (see Section 7). In a fire, hazardous decomposition products such as smoke, acrolein, carbon monoxide, carbon dioxide, and oxides of nitrogen may be produced. Keep away from oxidising agents and strongly alkaline and strongly acidic materials to prevent the possibility of an exothermic reaction.
 Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

There is no data available on the product itself. The product has been assessed by evaluation of its raw materials. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short term and long term exposure by oral, inhalation and dermal routes of exposure and eye contact. See Sections 3 and 15 for details of the resulting hazard classification. Splashes in the eye may cause irritation and reversible local damage. Based on the properties of the epoxy constituents and considering toxicological data on similar preparations, this preparation may be a skin sensitizer and an irritant. It contains low molecular weight epoxy constituents which are irritating to eyes, mucous membrane and skin. Repeated skin contact may lead to irritation and to sensitization, possibly with cross-sensitisation to other epoxies. Skin contact with the preparation and exposure to mist and vapour should be avoided.

Acute Oral Toxicity: LD50 (rat): >5,000mg/Kg. Acute Dermal Toxicity: LD50 (rabbit): 20,000mg/Kg.

12. ECOLOGICAL INFORMATION

There is no data available on the product itself. This product has been assessed by evaluation of its raw materials and is assessed for ecological hazards accordingly. See Sections 3 and 15 for details. The product should not be allowed to enter drains or watercourses or be deposited where it can affect ground or surface waters. Bisphenol A based liquid epoxy resins as well as many reactive diluents were classified as dangerous for the environment by the Association of Plastic Manufacturers in Europe (APME) based on available data and knowledge. When properly cured with appropriate curing agent this epoxy base is completely inert to the environment.

13. DISPOSAL CONSIDERATIONS

Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with local and federal regulations.

14. TRANSPORT INFORMATION

Transport within the user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of accident or spillage.

Onward transport, subsequent to purchase:

Proper Shipping Name: Resinous compound, "Not Regulated" by IATA, USDOT or IMO.

UN Number:

Hazard Class:

Packing Group:

Sub Hazard Class:

Technical Name1 (NOS entries only):

Technical Name 2 (NOS entries only): Possible Marine Pollutant in unreacted condition – do not allow to enter water courses.

Marine Pollutant: (IMDG only) (Y/N): >200°F

Flashpoint (IMDG only):

15. REGULATORY INFORMATIONDanger Classifications

Irritant.

Contains

Benzyl alcohol, 4, 4'-Methylenebis(cyclohexylamine) the remaining components are a trade secret, non-aromatic polyamine.

Irritating to eyes and skin. May cause sensitisation by skin contact.

Safety Phrases

After contact with skin, wash immediately with plenty of soap and water. Wear suitable protective gloves and eye/face protection. Avoid contact with eyes. Avoid release to the environment. Refer to special instruction/Safety Data Sheet.

"P" Phrases

Do not breathe vapor. Contains epoxy constituents. See information supplied by the manufacturer (This information is provided by this Safety Data Sheet).

The information contained in this Safety Data Sheet does not constitute the user's own assessment of the workplace risks as required by other health and safety legislation.

16. OTHER INFORMATIONText of any Risk Phrases listed in Section 2

R36/38 Irritating to eyes and skin.

R43 May cause sensitisation by skin contact.

R51/53 Toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.

S2 Keep of the reach of children

S3/7/9 Keep container tightly closed in a cool, well ventilated place.

S24 Avoid contact with skin

S28 After contact with skin, wash immediately with water and/or gentle skin cleanser, do not use solvent.

S37/39 Wear suitable gloves and eye/face protection.

S61 Avoid release to the environment.

HMIS ratings: Health: 2; Flammability: 1; Reactivity: 0.