# LAPOX® ASH-10 FF



# (4,4'-Diamino diphenyl sulfone Free Flow)

Technical Data Sheet | Polymers Business

#### Description

4,4'-DDS (Free Flow) is a white to off-white, odourless, non-volatile crystalline powder. This is used as curing agent with epoxy resins specially to obtain slow reactivity and extended pot life of mix. Unique combination of mechanical, electrical, and thermal properties are major advantages of this hardener when processed and cured appropriately with epoxy resins.

#### **Chemical structure**

$$\mathsf{H}_2\mathsf{N} - \underbrace{\left\langle \begin{array}{c} \mathsf{O} \\ \mathsf{II} \\ \mathsf{S} \\ \mathsf{O} \end{array} \right\rangle}_{\mathsf{N}} - \mathsf{N}\mathsf{H}_2$$

### **Applications**

Electrical moulding compounds (EMC)

FRP composites

High performance epoxy coatings

Manufacturing of polyamides and polyimides

Prepregs

Printed circuit boards (PCB)

Structural adhesives

## **Advantages**

Excellent thermal stability

Outstanding mechanical and electrical properties Slow reactivity and longer shelf life of prepreg

## **Typical specifications**

Properties	Unit	Test method	Values
Description	-	Visual	White to off-white powder
Assay	% w/w	Titration	Min 99
Melting point	°C	Atul	176 - 180
Moisture content (by KF)	% w/w	Atul	Max 0.15
Ash content	% w/w	Atul	Max 0.1
Compressibility index	-	Atul	Max 25
Solubility [Soluble in 30 parts of Ethanol (96%)]	-	Atul	Clear solution
Purity	%	HPLC	Min 99

# **Packaging**

4,4'-DDS (Free Flow) is available in 15 kg and 25 kg fiber drums. Other packing may be considered on request.

#### Storage and handling

4,4'-DDS (Free Flow) must be stored below 40°C in a sealed container in dry and well-ventilated place. The shelf life of this product is 5 years if stored at recommended temperature in its original container away from sparks, flame, humidity and excessive heat. Avoid storage near ignition sources, hot environment, and in sunlight.

August 2017 Page 1 of 2

# LAPOX® ASH-10 FF (4,4'-Diamino diphenyl sulfone Free Flow)



Technical Data Sheet | Polymers Business

Safety Wear personal protective equipment (PPE). Avoid contact with the eyes and skin. In case

of direct contact and irritation, the material should be washed off immediately with soap and warm water. Avoid breathing vapours, mist or gas. Please refer to the Safety Data

Sheet (SDS) of 4,4'-DDS (Free Flow) for detailed safety instructions.

Spills and disposal In case of spills, sweep up and shovel the spilled material. Keep spilled material in

suitable, closed containers for disposal. Flush area with water to remove trace residue. Do not allow the product to reach the sewage system. Waste must be disposed of in

accordance with federal, state or local regulations, as applicable.

Contact E-mail: polymers@atul.co.in

Website: www.atul.co.in

**Note** Lapox<sup>®</sup> is a registered trademark of Atul Ltd.

Manufacturing site

Atul 396 020, Gujarat, India

Telephone: (+91 2632) 230000 | 233261

E-mail: contact@atul.co.in

Disclaimer: The information contained herein is for information purposes only. While enough care is taken in disclosing the information, users of this information are advised to cross-check the same depending upon use | application. Atul Ltd does not give any assurance or warranty or guarantee in regard to the accuracy or completeness of the information and no claim or liability will be accepted or entertained in regard thereto. Atul Ltd makes no warranty of any kind, expressed or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose or performance or usage of trade.

August 2017 Page 2 of