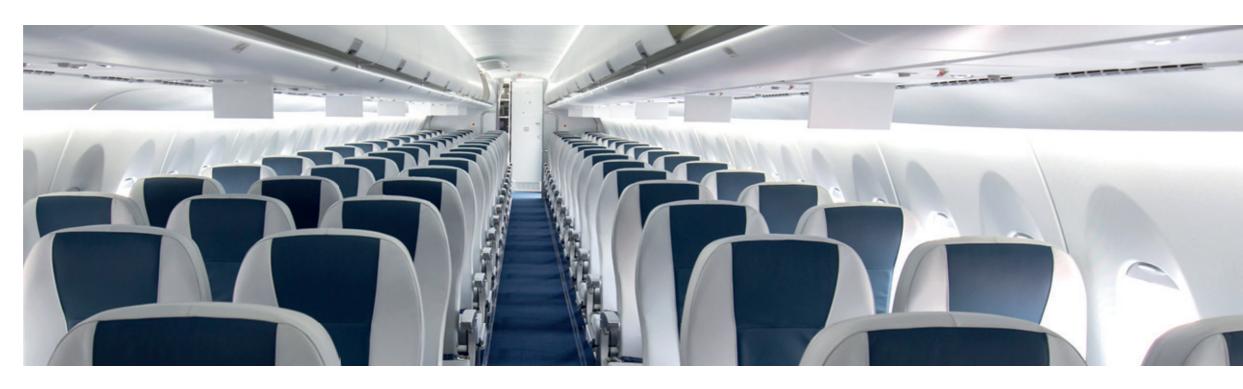


Void fillers, adhesives and composite solutions

Aerospace materials for production, assembly and maintenance



Making a material difference in the aerospace industry



Araldite® Epibond® Epocast® Eposert™ Uralane®

Huntsman Advanced Materials is a leading global supplier of advanced, high-performance materials for the fabrication, assembly and repair of interior and exterior aircraft components. Prominent aerospace companies look to us for innovations in adhesives, laminating systems and void fillers.

Production process improvements, innovative designs, weight savings, compliance to stringent aerospace standards and low maintenance costs have become vital to success and can be achieved with our products.

Adhesives, composites and void fillers serving the global aerospace industry for more than 70 years



Reduced cycle time

Our solutions help unlock production bottlenecks by improving productivity without compromising technical performance.



Long term performance

Our adhesives offer even distribution of load over a bonded area, reducing the number of drilled holes and limiting points of entry for corrosion and stress.



Lightweight design

Our materials meet stringent mechanical requirements while offering a variety of compressive strength and density options, allowing for the lightest weight selection.



Flame retardancy

Many of our products are flame retardant and exhibit the low flame, smoke and toxicity characteristics required to comply with established regulations governing materials used in large civil and commercial aircraft.



Lower manufacturing costs

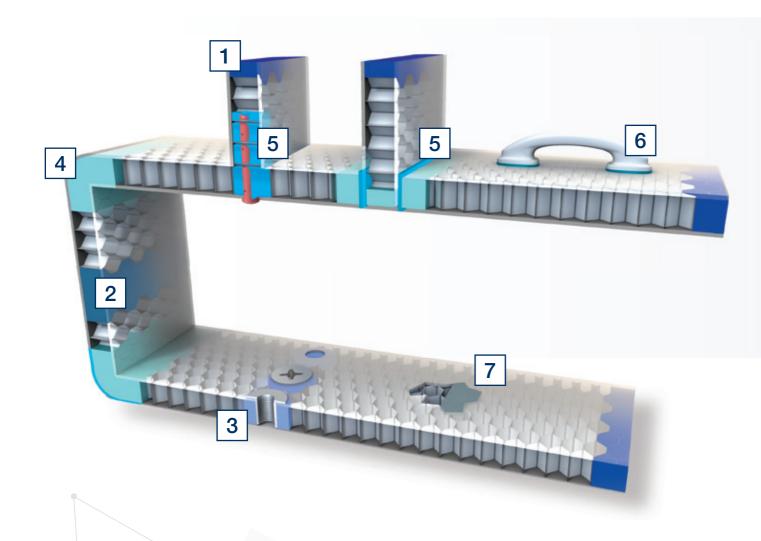
By reducing the number of joining and finishing operations, the overall production cycle can be reduced. This saves on labor costs and results in improved productivity.



Sustainability

Our products are designed to comply with regional environmental regulations. Our global manufacturing footprint, local technical support and commercial teams ensure both close proximity with our customers and security of supply.

Our range of advanced technologies optimize production, assembly and repair operations



Huntsman's versatile adhesives, composites, edge and void fillers are used by aircraft manufacturers who serve commercial airlines, general aviation and the defense industry throughout the world. Our products are used in a wide range of applications ranging from honeycomb reinforcement, edge sealing, insert potting or bonding, panel forming, component bonding and laminating.

In our efforts to develop innovative solutions for the aerospace market, we strive to meet the high product standards set forth by the industry and federal regulations that govern the performance properties of materials used in aircraft: strength, weight, toughness, flexibility, low coefficient of thermal expansion, high resistance to corrosion and fatigue, flame retardancy, halogen-free formulations, noise and vibrational damping. Void fillers for core reinforcement and insert potting

- 1. Edge fill and close out
- 2. Panel reinforcement
- 3. Insert potting
- 4. Panel forming

Adhesives for joining and bonding

- 5. Panel pin bonding
- 6. Component bonding

Laminating resins for composite production and repair

7. Manufacturing and repair







We help you select the right product for your needs

Our global aerospace brochure guides you through the main considerations that must be taken into account when selecting the right product for a specific production, assembly or repair operation. Use the enclosed selector guides to determine which products are best suited for your particular applications. For additional information, please contact your sales or technical representative.

Need technical help or a distributor?

Submit your questions to our technical team at:

www.aralditeadhesives.com

Araldite® and Epocast® void fillers enable weight savings and high strength Overhead bins Sidewall panels Cabin flooring Edge sealing Reinforcement Panel forming Insert potting Aircraft manufacturers and repair For ditch/pot/fold applications, we Reinforcement of honeycomb panels Medium and low-density grades of is needed to withstand high loading. stations use these materials to build Araldite® and Epocast® epoxy void offer a range of products with fast to Huntsman Epocast® products offer and re-furbish cabin components such fillers and Uralane® polyurethane moderate handling strength times, flexibility for interior construction and

Void fillers for core reinforcement and insert potting

Araldite® and Epocast® epoxy void fillers, and Eposert™ pre-cured inserts, provide solutions for edge sealing, insert potting, and for honeycomb assembly, reinforcement and repair. Our portfolio is qualified to Airbus, Boeing, Goodrich, Gulfstream, Bombardier, Bell, Rohr, Rolls Royce, and other key OEM specifications, and are listed as approved repair materials in Structural Repair Manuals and Service Bulletins. From nacelles, engines, rudders and radomes, to overhead bins, cabin doors, interior panels and cabin flooring, our products are found in a wide variety of parts today.

Find our product offerings in the enclosed selector guide -> meet the most stringent requirements of numerous aircraft specifications. Huntsman also offers a unique range of Eposert™ pre-cured inserts that can be installed rapidly in a honeycomb core before fasteners are added. These inserts are well suited to reinforce composite floor panels, galley walls, bulkheads and lavatory cabinets.

as overhead baggage bins, floor panels and lavatory cabinets as well as flight control surfaces, nacelles and landing gear doors. Huntsman void fillers are produced in a range of densities to meet a variety of performance and handling requirements. Many of our edge sealing materials are selfextinguishing and feature easy to apply viscosities, as well as sag-resistance for use on vertical surfaces.

adhesives provide dependable reinforcement for honeycomb composite panels before inserting fasteners. Typical applications include composite floor panels, galley walls, bulkheads and lavatory cabinets.

optimum rheological properties to control product flow and high mechanical and impact performance.

Adhesives for joining and bonding

Our high-performance Araldite®, Epibond® and Uralane® adhesives provide superior joining and bonding solutions for plastics, metals, composite materials and other substrates. Huntsman adhesives offer manufacturing process improvements and reductions in weight over other fastening methods. Additionally, manufacturers can select adhesives resistant to fatigue, chemicals and temperatures, with mechanical properties that vary from rigid to flexible and offer long-term durability. Our products are specified in numerous applications ranging from interior parts such as seats, lavatories, overhead bins, galleys and monuments to exterior parts such as nacelles, landing gear doors and control surfaces.

Find our product offerings in the enclosed selector guide →



Laminating resins for composite production and repair

Huntsman epoxy laminating resin systems have been an industry standard for fabricating composite aircraft parts for many years. These products are used for the manufacturing and repair of composite radomes, fairings, flight control surfaces, cargo and cabin panels, and more. Huntsman resins combine ease of handling with excellent mechanical strength to perform in the most demanding applications. Many of Huntsman's laminating resins are flame retardant and can be used to wet out fiberglass, carbon fiber and honeycomb core reinforcements.

Find our product offerings in the enclosed selector guide →





to aircraft manufacturers' specifications. They are qualified across platforms including fixed wing, rotorcraft and spacecraft, and across the aircraft life cycle from new design to MRO.

We offer high-performance products qualified to material specifications and continuously strive to increase these approvals through on-going innovation.

Aerospace Composite Technologies

M1368 - 001 Araldite® 2011

Airbus I+D-N-200 - Z-18.115/2 Epocast® 89537 A/B AIMS 10-04-001 Uralane® 5774 A/C AIMS 10-04-006 Araldite® 1570 FST A/B AIMS 10-03-001 Araldite® 1644 A/B AIMS 10-04-020 Araldite® 2011 ABR 2-0179 Araldite® 2011 ABP 5-1158 Araldite® 2011 Araldite® 2011 DAN 1284-01 ASNA 4049 Araldite® 2011 ABP 5-1158 Araldite® 2012 ABR 2-0186 Araldite® 2012 ABP 5-1158 Araldite® 2013 ABR 2-0181 Araldite® 2015 ABP 5-1158 Araldite® 2015 ASNA 4072 Araldite® 252-1 AIMS 10-03-005 Araldite® 252-1 ASNA 4125 Araldite® 420 A/B I+D-N-200 - Z15.213/1 Araldite® 420 A/B AIMS 10-04-024 Araldite® 501 A/B ASNA 4047 Araldite® 501 A/B ABP 5-1158 Araldite® AV 121N-1 / HY 951 Araldite® AV 121N-1 / HY 951 ABR 2-0183 DAN 1187-01 Araldite® AW 134 / HY 994 DAN 1199-01 Araldite® AW 134 / HY 994 ABP 5-1158 Araldite® AY 103-1 / HY 951 ABR 2-0184 Araldite® AY 103-1 / HY 951 ABP 5-1158 Araldite® AY 103-1/ HY 991 ABR 2- 0185 Araldite® AY 103-1/ HY 991 AIMS 08-01-001 Araldite® LY 5052 / Aradur® 5052 AIMS 08-02-001 Araldite® LY 5052 / Aradur® 5052 AIMS 05-04-103 Araldite® LY 5052 / Aradur® 5052 Airbus / Coasa RP1021209 Epocast® 1627-2

Airbus Helicopters

ECS 0049 Epocast® 52 A/B

Alenia Aermacchi

MDL08055 Epocast® 1617 A/B

MDL8027, Type 7	CG 1305 R/H
MDL8027, Type 7	Epocast® 89537 A/B

Allied Signal

PCS 5606 Epocast® 1652 A/B

Army

13312291 Uralane® 5774 A/C

Astrium

MPS0059 Araldite® 403 A/B

B/E Aerospace

LCMS 202, Type 1 Uralane® 5774 A/C

Bell Helicopter

299-947-097, Type 5 Epocast® 1626 A/B

Boeing	
BMS 5-28, Type 7, Class 1	CG 1305 A/B
HMS 16-1068, Class 8B	Epibond® 1217 A/B
BMS 5-126, Type 2, Class 1, Gr B	Epibond® 1534 A/B
BMS 5-126, Type 3, Class 1, Gr B	Epibond® 1536 A/B
BMS 5-126, Type 6, Class 1, Gr B	Epibond® 1539 A/B
BMS 5-25, Type 2, Gr 1	Epibond® 1539 A/B-10
BMS 5-126, Type 4, Class 1, Gr B	Epibond® 1544 A/C
BMS 5-126, Type 4, Class 4, Gr B	Epibond® 1544-1 A-82/D
BMS 5-126, Type 4, Class 4, Gr B	Epibond® 1544 A-71/D
D800-10411-1, PDD 6-1	Epibond® 1565 A/B
BMS 5-107, Class 1	Epibond® 420 A/B
BMS 5-123, Type 1, Class 3	Epibond® 8543 C/B
BMS 5-28, Type 4	Epocast® 1488 A/B
BMS 5-28, Type 3	Epocast® 1511 A/B
BMS 5-28, Type 10	Epocast® 1610-A1
BMS 5-28, Type 14, Class 1	Epocast® 1614-A1
BMS 5-28, Type 14, Class 2	Epocast® 1614-A1
MMS 347, Type 2, Rev G, ADD 1	Epocast® 1614-A1
901-330-140-107	Epocast® 1614-A1-11/CSI
Boeing / MESA HS5933 (A) 150-100	Epocast® 1614-A1-64/CSI
Boeing / MESA HS5933 (A) 150-35	Epocast® 1614-A1-65/CSI
Boeing / MESA HS5933 (A) 150-25	Epocast® 1614-A1-66/CSI
Boeing / MESA HS5933 (A) 100-25	Epocast® 1614-A1-67/CSI
Boeing / MESA HS5933 (A) 150-50	Epocast® 1614-A1-68
BMS 5-28, Type 15	Epocast® 1615 A/B

BMS 5-28, Type 17	Epocast® 1617 A/B
BMS 5-28, Type 18, Class 1	Epocast® 1618 D/B
BMS 5-28, Type 19	Epocast® 1619 A/B
BMS 5-28, Type 25	Epocast® 1625 A1/B1
BMS 5-28, Type 26, Class 1	Epocast® 1626 A/B
BMS 5-28, Type 26, Class 2	Epocast® 1626 C1/D2
BMS 5-28, Type 27	Epocast® 1627-2
BMS 5-28, Type 28	Epocast® 1628 A/B
BMS 5-28, Type 9	Epocast® 1629 A/B
BMS 5-28, Type 18, Class 2	Epocast® 1633 A/B
BMS 5-28, Type 18, Class 2	Epocast® 1633-A40/B
BMS 5-28, Type 18, Class 2	Epocast® 1633-A41/B
BMS 5-28, Type 18, Class 2	Epocast® 1633-A50/B
BMS 5-28, Type 31	Epocast® 1635 A/B
BMS 5-28, Type 6	Epocast® 1636 A/B
BMS 5-28, Type 18	Epocast® 1648 A/B
BMS 5-28, Type 1	Epocast® 167 A/B
BMS 8-201, Type 3	Epocast® 50 A1/9816
BMS 8-201, Type 4	Epocast® 50 A1/946
BMS 5-28, Type 7, Class 2	Epocast® 89537 A/B
BMS 5-28, Type 12, Class 1	Epocast® 938-A2
BMS 5-28, Type 13	Epocast® 938-A2
BMS 5-28, Type 12, Class 2	Epocast® 938-A2
BMS 5-105, Type 3	Uralane® 5759 G/D
BMS 5-105, Type 5	Uralane® 5774 A/C
BMS 5-105, Type 6	Uralane® 5779 A/B
BMS 5-105, Type 6	Uralane® 5779 A-80/B
BMS 5-107, Class 1	Araldite® 420 A/B

Bombardier

SMS 41, Type 3	Epocast® 1617 A/B
BOMS 820-001 TY 2	Epibond® 8000 FR A/B

Cessna

Epocast® 1652 A/B CMNP085

Cirrus

E00000061, Type 1, Form B Epibond® 100 A/C

Douglas

HMS 16-1115 Type 3, SUPP 1 Araldite® 501 A/B

Dassault Aviation

DGQT 1.7.0.22 Araldite® 2011

Embraer	
Embraer/Kawasaki 190-38790-903	Epocast® 1614-A1-61/CSI
MEP 10-051, Type 2, Class 1	Epocast® 1652 A/B

MEP 10-051, Type 2, Class 1	Epocast® 1652 A/B
MEP 22-011	Epocast® 50 A1/946
MEP 22-011	Epocast® 50 A1/9816
MEP 09-022	Araldite® AV 138M-1 / HV 998

FACC

FMS 4140 Araldite® 2013

Fairchild Dornier

DON 816 Araldite® 2026

Fokker

TH5.558/1	Araldite® 2011
TH5.558/6	Araldite® 2011
TH5.937	Araldite® 2013-1
TH5.558/1	Araldite® AW 2101 / HW 2951

Gamesa Aeronautica

GMS 124047	Epocast® 1617 A/B
GMS 124050	Epibond® 1544 A-82/D

GE

EMPIS A15 B205 (GE A15B205D1)

Epocast® 1614-A2

Goodrich

RMS 027, type XV, SCO 036

Epocast® 927-1 GB

Gulfstream

GMS 4005, Type 1, Class C, FM 2	Epocast® 1636 A/B
GMS 4005, Type 1, Class B, FM 1	Epocast® 1652 A/B
GAA 100BN1	Uralane® 5774 A/C

Hamilton-Sundstrand

CM34.40-38-01

Epibond® 1210 A/B

Hawker de Havilland

EN-106G309

Epocast® 1614-A1

Heath Tecna

HMS A5-001, Type 2, Class 3	Epibond® 1559-1 A/B
HMS A4-001, Type 1, Class 2	Uralane® 5774 A/C

HMS A4-001, Type 1, Class 3	Uralane® 5779 A/B
HMS A5-001 Type 1 Class 1	Epibond® 8000 FR A/B

Hexcel

RMS 8955, C	Araldite® 403 A/B
RMS 8957, E	Araldite® 420 A/B

Hurel-Hispano

HS/DFO-010

Epocast® 1652 A/B

Kaman Composite

CMS-007-4	Epocast® 1617 A/B
CMS-007-3	Epocast® 1636 A/B

Kearfott

Y105A053-101

Epibond® 1217 A/B

Lockheed Martin

LAC 30-4639-0100	Epibond® 1210 A/9615 A
LAC 30-4639-0300	Epibond® 1210 A/9615-10
LAC 30-4639-0200	Epibond® 1210 A/9861
STM M1067, Type 1	Epocast® 1614-A1
STM M1067, Type 2	Epocast® 1614-A1
STM M1069	Epocast® 89537 A/B

Loral

23-P12027-0003

Epibond® 1210 A/9861

MBDA

PS 1728	Araldite® 2011
PS 1729	Araldite® AW 106
PS 1690	Araldite® AY 105-1
PS 1691	Hardener HY 953 F
PS 1727	Hardener HV 953 U

MD Helicopters

HMS 16-1115	Araldite® 501 A/B
MDM 16-1068, Class 8B	Epibond® 1217 A/B

Meggitt Composites

MS 0013 Araldite® 420 A/B

Mitsubishi

M1074, Type 2	Epocast® 1629 A/B
M1074, Type 1	Epocast® 167 A/B
M1129, Class A	Epocast® 169 A-1/9615

Navy

5675396	Uralane® 5776 A/B
3073090	Oralane Strong
NWC 78A151	Uralane® 5774 A/C
WS 9087	Uralane® 5776 A/B

Nordam

NTR-MS 1301, Type 2, Class 4, Gr F	Epocast® 1614-A1
NTR-MS 1301, Type 2, Class 4, Gr F	Epocast® 1614-A2

Northrop Grumman

ACS-MRS-5601	Epocast® 1614-A2
GM 4006, Type 1, Class B, FM 1	Epocast® 1652 A/B
GM 4006, Type 1, Class B, FM 1	Epocast® 1656 A/B
GR 110PF1	Epocast® 1670 A/B
GM 4006, Type 3, Class B, FM1	Epocast® 938-A2
GA 100BN	Uralane® 5774 A/C

Piaggio Aerospace

NP190112, Type 17

Epocast® 1617 A/B

Pratt & Whitney

TS10430	Epibond® 1534 A/B
PWA 452	Epocast® 1614-A1
CPW 505	Epocast® 1656 A/B
PWA 36757	Epocast® 1661

ROHR

RMS 027, Type 5, Class 3, SCO 036	Epocast® 1617 A/B
RMS 027, Type 13, SCO 036	Epocast® 938-A2

Rolls Royce

MSRR 9332	Araldite® AV 138M-1 / HV 998-1
MSRR 1076	Araldite® 1641 A/B

Roxel

MTA 00137	Araldite® 2011
204 251-PS/1/E000	XD 4236-3

SAE Aerospace (CACRC)

AMS 2980

Epocast® 52 A/B

Sikorsky

SS-9587, (-008A) Type 3, Class 1	Epocast® 1614-A1
SS-9587, (-003A) Type 2, Class 1	Epocast® 1652 A/B
SS-9587, (-002A & -005A) Type 1	Epocast® 169 A-1/9615
SS-9440, (-001A)	Epocast® 169 A-1/946

Spectrolab

44418

Epibond® 1210 A/9861

Spirit Aero System

SMS-116201, Type 1	CG 1305 A/B
SMS-116201, Type 3	Epocast® 1626 C1/D2
SMS-116201, Type 2	Epocast® 938-A2

Sundstrand

CM 34.40-38-01

Epibond® 1210 A/B

Triumph Composite

TCE-M-20710-4, Type 1	Epibond® 420 A/B
ГСЕ-M-20710-6, Type 1	Epocast® 1628 A/B

United Launch Alliance (ULA)

STM M1067, Type 1 & type 2

Epocast® 1614-A1

Vought

207-8-417	Epocast® 1614-A1
901-031-442-111U	Epocast® 1614-A1-59/CSI
901-031-442-113U	Epocast® 1614-A1-62/CSI
901-031-442-115U	Epocast® 1614-A1-63/CSI
901-031-442-101U	Epocast® 1614-A1-7/CSI
901-031-442-103U	Epocast® 1614-A1-8/CSI
901-031-442-105U	Epocast® 1614-A1-9/CSI
VM 4006, Type 1, Class D, FM1	Epocast® 1656 A/B
VM 4006, Type 3, Class B, FM 1	Epocast® 938-A2

Westland Helicopters

WHPS 012	Araldite® AY 103-1 / HY 951
WHPS 418	Araldite® AY 105-1 / HY 953F

We value your challenge



With innovation

Every day, all over the world, our scientists engage in intensive research and development focusing on one goal: to deliver innovative solutions by working hand-in-hand with our business partners. Together, through a continual exchange of ideas, supported by an experienced team of sales and technical specialists, we strive to deliver innovative and regulatory compliant solutions.

We track both new market expectations and changing regulations. Protection of the environment, as well as health and safety are paramount concerns, playing an integral part in our development projects.

With customer understanding

We market a unique product portfolio and a broad range of forward-looking solutions for our customers. Customers and partners benefit from an advanced level of service in:

- > product selection and quality
- > product trials in-house and with customers
- > customer seminars and training
- > technical support

Partnership with our customers is more than simply 'putting them first'. It requires long-term commitment to forging close relationships that create synergies of knowledge, security and adaptability to create a successful, shared future.

With care

Sustainability is a fundamental part of our corporate and business strategy. We see a better world in which our innovations help reduce consumption of natural resources and improve the quality of life for people everywhere.

We are identifying long-term trends that affect our markets, and are looking to see how our products and applications can play a part in providing solutions to the challenges those markets face.

Huntsman provides unique, high-quality and reliable technologies to ensure our customers' success



Huntsman Advanced Materials

Our Advanced Materials division is a leading global chemical solutions provider with a long heritage of pioneering technologically advanced epoxy, acrylic, phenolic and polyurethane-based polymer products.

Our capabilities in high-performance adhesives and composites, delivered by more than 1600 associates, serve over 2000 global customers with innovative, tailor-made solutions and more than 1500 products which address global engineering challenges.

We operate synthesis, formulating and production facilities around the world



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Enriching lives through innovation

For more information

www.huntsman.com/advanced_materials advanced_materials@huntsman.com

Europe, Middle East & Africa

Huntsman Advanced Materials (Switzerland) GmbH Klybeckstrasse 200

4002 Basel Switzerland

Tel. +41 61 299 1111 Fax +41 61 299 1112

Asia Pacific & India

Huntsman Advanced Materials (Guangdong) Co., Ltd. Room 4903-4906, Maxdo Centre, 8 Xing Yi Road

Shanghai 200336, P.R.China

Tel. + 86 21 2325 7888 Fax + 86 21 2325 7808

Americas

Huntsman Advanced Materials Americas Inc. 10003 Woodloch Forest Drive The Woodlands Texas 77380 USA

Tel. +1 888 564 9318 Fax +1 281 719 4047

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The Product may be or become hazardous. Buyer should (i) obtain Material Safety Data Sheets and Technical Data Sheets from Huntsman containing detailed information on Product hazards and toxicity, together with proper shipping, handling and storage procedures for the Product, (ii) take all steps necessary to adequately inform, warn and familiarize its employees, agents, direct and in direct customers and contractors who may handle or be exposed to the Product of all hazards pertaining to and proper procedures for safe handling, use, storage, transportation and disposal of and exposure to the Product and (iii) comply with and ensure that its employees, agents, direct and indirect customers and contractors who may handle or be exposed to the Product comply with all safety information contained in the applicable Material Safety Data Sheets, Technical Data Sheets or other instructions provided by Huntsman and all applicable laws, regulations and standards relating to the handling, use, storage, distribution and disposal of and exposure to the Product. Please note that products may differ from country to country. If you have any queries, kindly contact your local Huntsman

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