RobinsonBrothers

Providing Excellence in Chemistry

Est. 1869



About Us

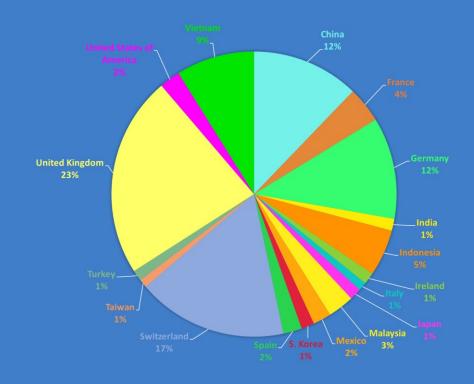
Family owned

Develop and manufacture chemical intermediates

Used in a wide variety of industries and applications

Two UK based manufacturing sites

Global Sales: Export: 77% Domestic: 23%





About Us

Services we offer:

- Research & Development
- New product development
- Process development & optimisation
- Scale-up manufacturing
- Contract, custom & toll manufacturing

We work with the top 5-10 global brands across a wide variety of industries

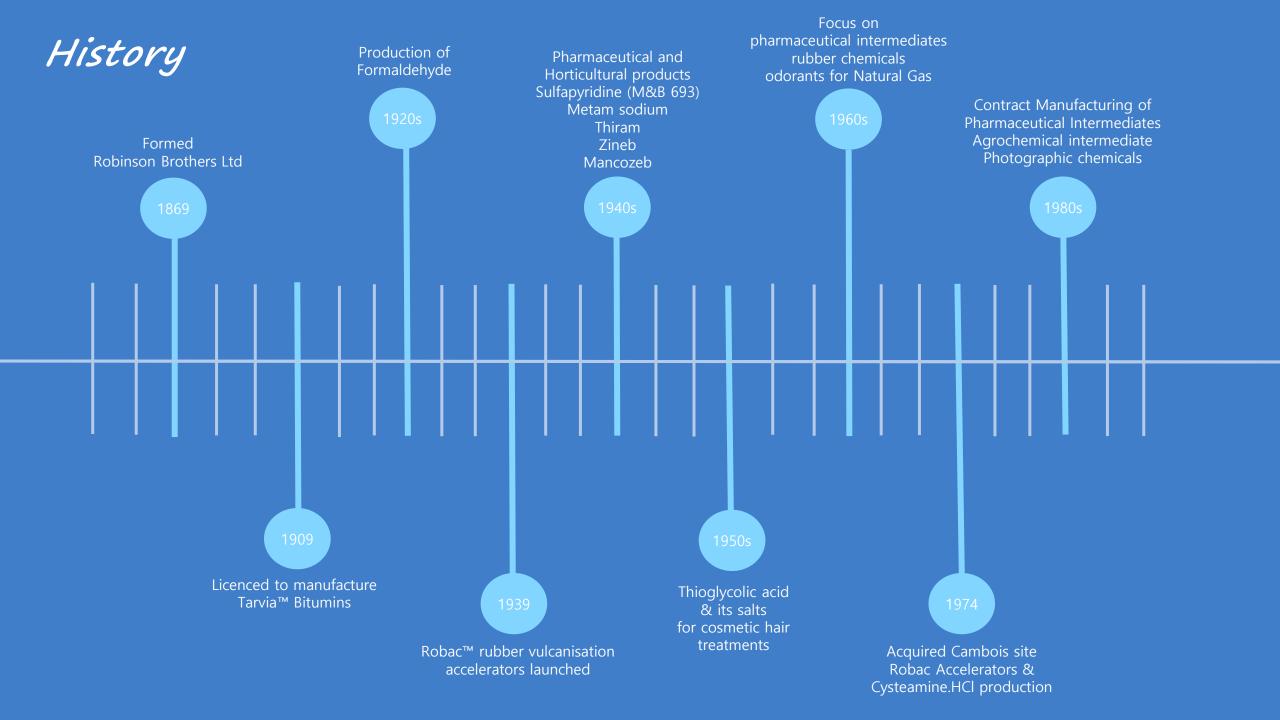


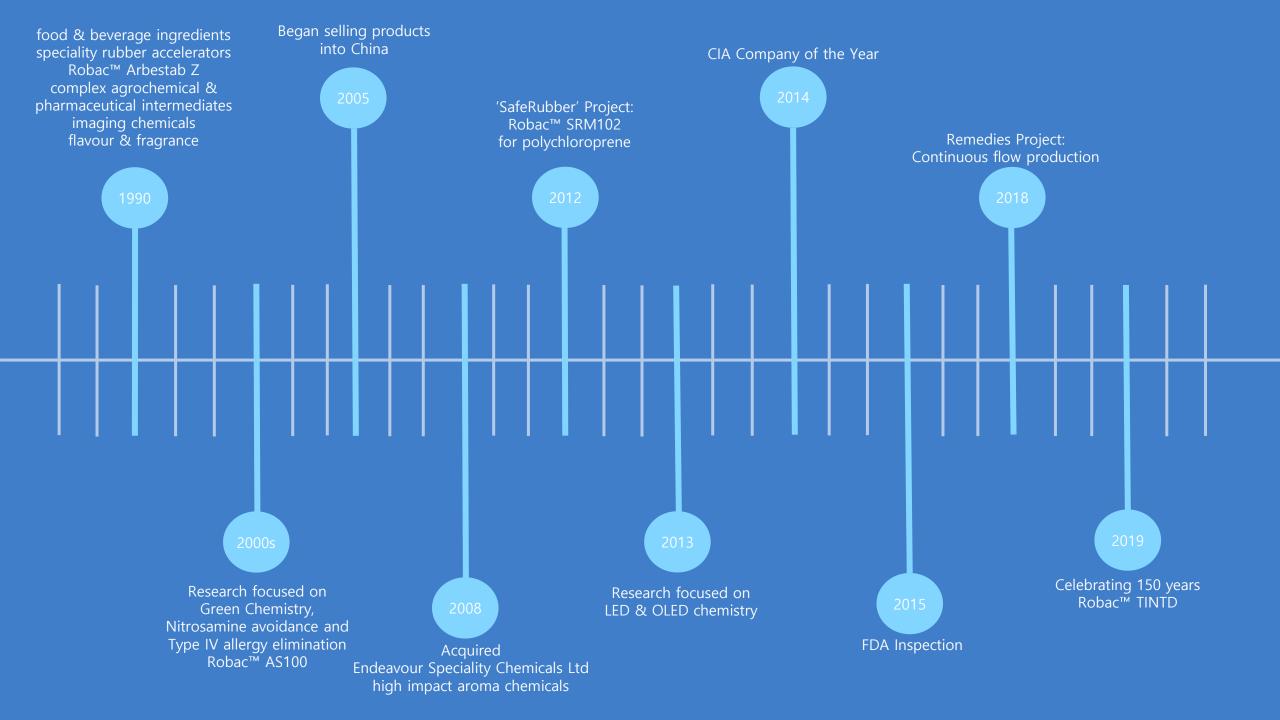


Business Units

RobinsonBrothers Excellence in Chemistry	Speciality & Fine Chemicals	Manufacture fine chemical intermediates Large scale manufacturer kilograms to large tonnes
Robac Technology	Rubber Accelerators	Manufacturer of innovative technical products for the rubber and polymer industry. Full technical services and bespoke technical solutions.
Endeavour Speciality Chemicals	High Impact Aroma Chemicals Research Chemicals & Intermediates	Manufacturer of quality assured flavour & fragrance ingredients. Small scale manufacturer of bespoke research chemicals and intermediates





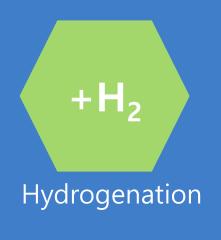


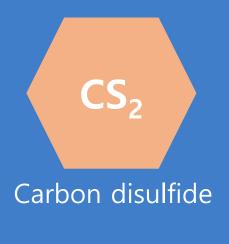
RobacTechnology - Speciality Rubber Accelerators

Satisfying Regulatory Challenges











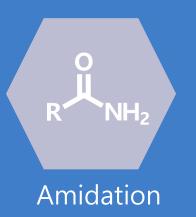


Chemistry Competences











Regular Processes

Acylation

Alkylation

Amination

Carboxylation

Chiral Synthesis

Chlorosulfonation

Condensation

Cyanation

Dehydrogenation

Diazotisation

Diels Alder Reaction

Esterification

Eschweiler-Clark/Leuckart

Friedel-Crafts Reaction

Hydrogenation

Methylation

Oxidation

Reduction

Sulfonation

Thiocarbonylation

Thiolation





CS₂













Regular Product Types

Amides Heterocycles(O,N,S) Thioamides

Amines Mercaptans Thiols

Amidines Sulfides Thioesters

Cyclohexanedione Sulfones Thioethers

Disulfides Sulfonylchlorides Thioureas

Dithiocarbamates Sulfoxides Xanthates & Xanthogen sulfides





Regular Raw Materials

Acid Chlorides

Alpha-Olefins

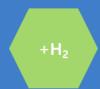
Alkylamines (aq., Liq., & gas)

Alkyl Halides

Alkoxides

Ammonia (aq. & anhydrous)

Boron trifluoride (gas & etherate)





Carbon disulfide (CS₂)

Chloroformates

Chlorosulfonic acid (CISO₃H)

Formaldehyde

Formic acid

Hydrogen

Hydrogen peroxide





Hydrogen sulfide (H2S)

Mercaptans (Thiols)

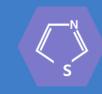
Metal hydrides (NaH, NaBH4 etc.)

Sulfur chlorides (S₂Cl₂, SOCl₂, SO₂Cl₂)

Sodium hydrosulfide (NaSH)

Sodium methylmercaptide (NaSCH₃)

Thioacids (Thioacetic, Mercaptoacetic)









Capacities at Robinson Brothers

R&D 100g – 1kg

PhD Chemists

Research routes of synthesis

Early sample provision

Provisional specifications

Grams to kilogram scale

Define process parameters

In-House Process safety testing: -

- **✓ Differential Scanning Calorimetry**
- ✓ Advanced Reactive System Screening Tool (ARSST)
- √ Chemisens Reaction Calorimetry

Kilo-lab 1kg-20kg

20L QVF Reactor

Process development

Production of early small kilograms

Capabilities: -

Temperature: -20°C - 60°C

Packed fractional-distillation column Liquids and solids addition

Pilot Plant 30kg – 1mt

First scale up & semi-production

Further process development & optimisation

Capabilities: -

Reactors: 200L - 1,250L

Glass-lined & Stainless Steel

Hydrogenation Autoclaves

1L - 30L

Temperature: 0°C - 160°C

Vacuum: atmospheric to 0.1mbar

Packed fractional-distillation column (15-Plates)

Filter Driers: -

Hastelloy & Stainless Steel

Production Operations 1mt – 100mt

Production kilogrammes – large tonnes

Continuous improvement activities

Capabilities: Batch Stirred Reactors
50L - 13,500L
Glass-lined & Stainless Steel

Hydrogenation Autoclaves 900-4,500L Glass-lined - Stainless - Carbon Steel Low - Medium - High Pressure 4Bar - 15Bar - 70Bar

Filter driers; Hastelloy & Stainless Steel

Gaseous reactants H₂S, H₂, BF₃, NH₃, CH₃NH₂, Propene etc.

Centrifuges; Stainless Steel & resin-lined

Fluid bed driers; Stainless Steel

Continuous investment program





Quality Accreditations

- Accreditations:
- ISO 9001:2015
- ISO14001:2015
- ISO 22000:2018









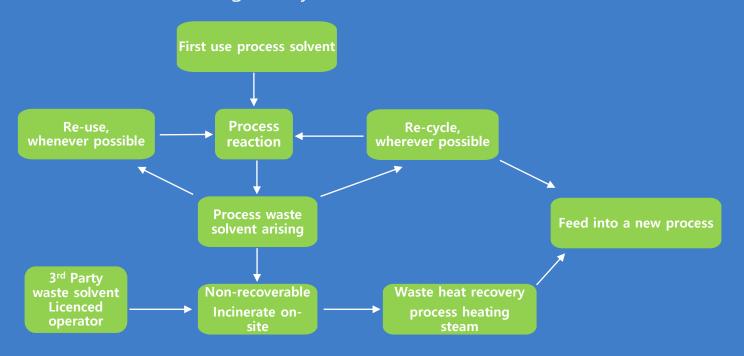
Sustainability

High efficacy of equipment allows handling and use of highly odorous compounds Continuous emissions monitoring system (CEMS)

Achieves >99.9% reduction of SO_x emissions

Waste incineration directive (WID) compliant

Dedicated SHE and Regulatory team







Collaborations

Continue to collaborate with:

- Global customers
- Research groups
- Equipment manufacturers
- Technology providers

Treatt - International flavour & fragrance supplier

Britest - Methods & Tools for better process understanding and design

UK Catalysis Hub

Universities - collaborations to enhance understanding & foster 'blue-sky' research

University of Birmingham Queen's University Belfast
University of Cambridge University of Nottingham

Brunel University London University of Manchester

3 x EU Funded 7th Framework (FP7) "Horizon 2020" projects



Loughborough University University of Strathclyde



Aston University

University of Warwick

Trade Associations





Working for chemical and pharmaceutical businesses







britishfootwear association



Industry Awards

Winners of ...

2020

Black Country Chamber Awards
Winner Family Business

2019

RoSPA Silver Award for Health and Safety Practices

BCCC Award: Young Apprentice of the Year awarded to Pilot Plant Technician

2019

2016

Britest Members' Day: Best Poster

2012

Chemical Industries Association GSK Innovation Award: Robac AS100 vulcanisation accelerator, a safe and nitrosamine-free technology

2013

Chemical Industries Association Responsible Care Special Award for Process Safety Leadership: Excellent leadership in safety

2014

Chemical Industries Association: Company of the Year

2014

Chemical Industries Association Innovation Award: GSK sponsored:



Summary

- Experts in a wide range of synthetic organic chemistry
- Focused on innovation
- Excellent reputation for quality, reliability and technical service
- Flexible and responsive to the needs of the customer
- Competitive, always aiming to add value for the customer
- REACH compliant
- UK manufacturer



Contact Us

Robinson Brothers Limited
Phoenix Street
West Bromwich
West Midlands
B70 0AH
UK

E: enquiries@robinsonbrothers.co.uk

T: +44(0)121 553 2451

W: www.robinsonbrothers.co.uk

