OXO Segment
We are a part of Grupa Azoty
Grupa Azoty’s main facilities
Grupa Azoty S.A. at a glance

- One of major European chemical producer
- No 1 in fertilizers, polyamide, OXO products, melamine, titanium white in Poland
- No 2 in mineral fertilizers in the EU
- Growth in scale through M&A activity
- Stable financial position
- Experienced management team
- Listed on Warsaw Stock Exchange since 2008
- Continued presence in the Respect Index
- Presence in the MSCI Indices

2018 financial results, 1€ = 4.2341 PLN
Grupa Azoty core business (revenue)

- **49%** Fertilizers
  - AN, CAN, NPK, AS, ASN, RSM, urea, ammonia

- **16%** Plastics
  - Polyamid, caprolactam

- **31%** Chemicals
  - OXO alcohols, plasticizers, aldehydes, melamine, urea technical grade, pigments

- **2%** Energy
  - Electricity and heat

- **2%** Others
  - Laboratory services, catalysts, others
Grupa Azoty ZAK S.A. is a manufacturer of nitrogen fertilizers with exceptional seeding parameters, oxo alcohols and plasticizers, including the first Polish non-phthalate plasticizer. Products from Kędzierzyn, such as ZAKsan®, Salmag®, RSM®, Oxoviflex® and NOXy® are used in many sectors of the economy: agriculture, construction, chemical processing, plastics and automotive industry. The company has its own heat and power plant, inland port and provides specialist laboratory services. It is the owner and main sponsor of the ZAKSA Kędzierzyn-Koźle volleyball club.
Grupa Azoty ZAK S.A. core business (revenue)

- Fertilizers: 41%
  - AN, CAN, UAN, urea, other

- OXO Segment: 46%
  - Plasticizers, OXO alcohols, aldehydes

- Others: 13%
  - Laboratory services, others
OXO Segment share in Grupy Azoty S.A. revenue: 8.9%

OXO Segment share in Grupy Azoty ZAK S.A. revenue: 46%
Discover the technology of tomorrow based on years of experience. Meet our OXO products. Choose trusted solution.
OXO Segment
Product portfolio

**General purpose plasticizers**
- Oxoviflex®
- Speciality plasticizers
- Oxovilen®
- Adoflex®

**Aldehydes**
- n-Butyraldehyde
- Isobutyraldehyde

**Oxo Alcohols**
- 2-Ethylhexanol
- n-Butanol
- Isobutanol
- Octyl alcohol F

**MAIN APPLICATIONS**
- PVC additive (for polymer flexibility), coatings, rubber products, glues, sealants

**INDUSTRY**
- Construction
- Automotive
- Shoe production
- Wire & cable
- Packaging
- Medical devices

**MAIN APPLICATIONS**
- Plasticizers
- Solvents
- Acrylates
- Acetates
- Fuel additives

**INDUSTRY**
- Plasticizers
- Paints and varnishes
- Glues
- Fuels
Thanks to our products everyday goods are flexible and user friendly. **Guess how frequently you use them?**

The amount of industries they are used in is vast!
OXO Segment

Mission / Vision

**Mission**
To deliver chemical products meeting customers needs.

**Vision**
We will become leading player in our industry. Our company will be a first choice supplier for the customer. We will achieve a highest value addend factor in our industry regardless of economic situation.

**Strategic aim**
Growth of sales and margins through market development, expanding port folio and product placement.

**Activities**
To introduce new generation plasticizers. To lengthen value chains. To perfect customer services employing innovative logistics solutions. To utilize new perspective market segments and markets. To optimize production and storage costs.
Tons of plasticizers produced since 1954

**General purpose Plasticizers**

- Oxoviflex®
- 65 kT/year

**Specialty Plasticizers**

- Adoflex® Oxovilen®
- 10 kT/year

TOTAL 75 kT/year

TOTAL 2.4 min tons
OXO alcohols
Capacities

Tons of OXO alcohols produced since 1986

2-Ethylhexanol
170 kT/year

n-Butanol
Isobutanol
Octyl alcohol F
55 kT/year

TOTAL 225 kT/year
TOTAL 4,744 mln tons
OXO Segment
Production process

- Propylene
- Aldehydes Plant
- Synthesis gas
- Water Gas Shift
- Terephthalic acid
- Adipic acid
- OXO Alcohols Plant
- n-Butyaldehyde
- Isobutyraldehyde
- 2-Ethylhexanol
- n-Butanol
- Isobutanol
- Octyl alcohol F
- Plasticizers Facility
- Oxoviflex®
- Oxovilen®
- Adoflex®

Hydrogen
Market share in European Union

- #1 in DEHT
- #2 in 2-EH

- Our experience in plasticizers dates back to 1954
- We utilize two separate plants
- We are the largest producer of DEHT/DOTP plasticizer - Oxoviflex® in European Union
- We are expanding our products portfolio. From 2019, we are offering specialty plasticizers - Adoflex® and Oxovilen®

OXO Alcohols

- We’ve been producing OXO alcohols since 1986
- Our plant was modernised in 1998 and is one of the most modern in Europe
- Apart from OXO alcohols we supply their precursors i.e. n-butyraldehyde & isobutyraldehyde
- We serve customers globally
High quality standards and still growing expectations of PVC converters are reflected in OXO Segment offer. Oxoviflex® is a user friendly non-phthalate PVC plasticizer that provides high performance parameters to flexible PVC products.

Oxoviflex® can be used in food contact applications and child toys. Our product complies with the highest quality requirements of purity, including the most strict ones of the European Pharmacopoeia.

Oxoviflex® - choose innovative and trusted solution
Adoflex® is high-quality bis(2-ethylhexyl)adipate. Due to its particularly good plasticizing properties, especially in low-temperature applications and a safe toxicological profile, it is recommended for food contact materials (in particular in the production of PVC food films).

In addition, Adoflex® is applied in the production of garden hoses, cables and coated fabrics. Depending on the application, it can be used as a main or functional plasticizer with Oxoviflex®. In addition to the processing of PVC, Adoflex® is recommended as a solvent in the cosmetics industry, plasticization of nitrocellulose, synthetic rubber and production of varnishes.
Oxovilen® is high quality di(n-butyl)terephthalate, which features fast fusing properties, low migration and provides higher flexibility to finished products. These properties allow it to be applied in PVC flooring as a functional plasticizer with Oxoviflex®, adhesives and sealants and in the production of various inks.
A new research unit at Grupa Azoty ZAK S.A.

On NOV, 26th 2018 Grupa Azoty ZAK S.A has officially lunched its Application and Development Laboratory (A&D Laboratory). It will significantly strengthen the company’s research and development potential. Laboratory gives us the opportunity develop production processes and chemicals in a laboratory scale, and perform advanced tests. Having so well-equipped base, we are able to offer customers products tailored to their needs.
For more visit Oxoplast.com! Read our blog and subscribe to our OXO newsletter.

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Thank you for attention