



Voluntary Commitment Progress Report 2025

Polymer Comply Europe

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Members version

Table of Contents

Introduction	3
Disclosure – Members report	3
Implementation of the Voluntary Commitment.....	4
Sample coverage	4
Volumes Handled	4
Location of facilities	6
AJIT Medical Diagnostic Guidance Implementation	7
AJIT Medical Diagnostic Reporting	7
AJIT Workers' Training Programme Implementation	8
Implementation of Exposure Minimisation Measures (EMM).....	9
Exposure Minimisation Plan	9
Engineering controls	9
Organisational measures	10
Personal protection measures	11
Medical data.....	13
Update of medical data.....	13
Results and discussion	14
Conclusion.....	15

Introduction

Hexahydrophthalic anhydride (HHPA) and methylhexahydrophthalic anhydride (MHHPA) (hereinafter collectively referred to as anhydrides) have been identified as substances of very high concern (SVHC) for their respiratory sensitising properties, as this property is considered by authorities as constituting an equivalent level of concern to carcinogenic, mutagenic and toxic to reproduction (CMR) substances.

The Anhydrides Joint Industry Taskforce (AJIT) is a joint initiative of manufacturers, formulators, and downstream users of the anhydrides used as epoxy hardeners (members listed in Annex I). The purpose of AJIT is:

1. To evaluate the socio-economic impacts of an authorisation;
2. To gather information on current exposure levels and risks associated with anhydrides and promote best practices regarding protective measures;
3. To inform authorities of possible risk management options for the use of anhydrides.

The potential socio-economic impact was described in the AJIT Public Consultation Report, which can be found on anhydrides.eu.

Over the course of the first semester of 2016, AJIT member companies performed exposure measurements and AJIT collected retrospective medical data from the members and non-members. This information was aggregated and presented in the AJIT Exposure and Medical Inventory. The inventory showed that since the 1990s, when the potential adverse health effects of anhydrides became apparent in scientific literature, the industry improved risk management measures and operating conditions to protect the health and safety of workers.

Moreover, since September 2018, AJIT members and PCE have worked on the implementation of an air monitoring protocol, proposing a harmonised procedure to follow in order to reduce the variability of the results. In 2019, an exposure measurement campaign involving AJIT companies was launched.

As an additional precautionary measure, AJIT member companies agreed to join a Voluntary Commitment whereby they agree to:

- Integrate the AJIT Medical Diagnostic Guideline into an annual medical surveillance;
- Develop and implement an exposure minimisation plan per plant;
- Implement an AJIT worker training programme;
- Improve the HHPA and MHHPA exposure measurement methodology.

The document herein reports on the progress from 2024, including the last updates on the implementation of the Voluntary Commitment and the annual medical surveillance.

Disclosure – Members report

This report is prepared exclusively for AJIT members and is intended solely for internal use and should not be shared, distributed, or disclosed to individuals or entities outside of AJIT.

A public version of the report can be found on anhydrides.eu.

Implementation of the Voluntary Commitment

Sample coverage

27 companies have signed the Voluntary Commitment. The data presented in this report is based on the implementation reports delivered by 24 sites representing 13 companies referent to the year of 2025.

The representation of different products produced is shown in

Figure 1.

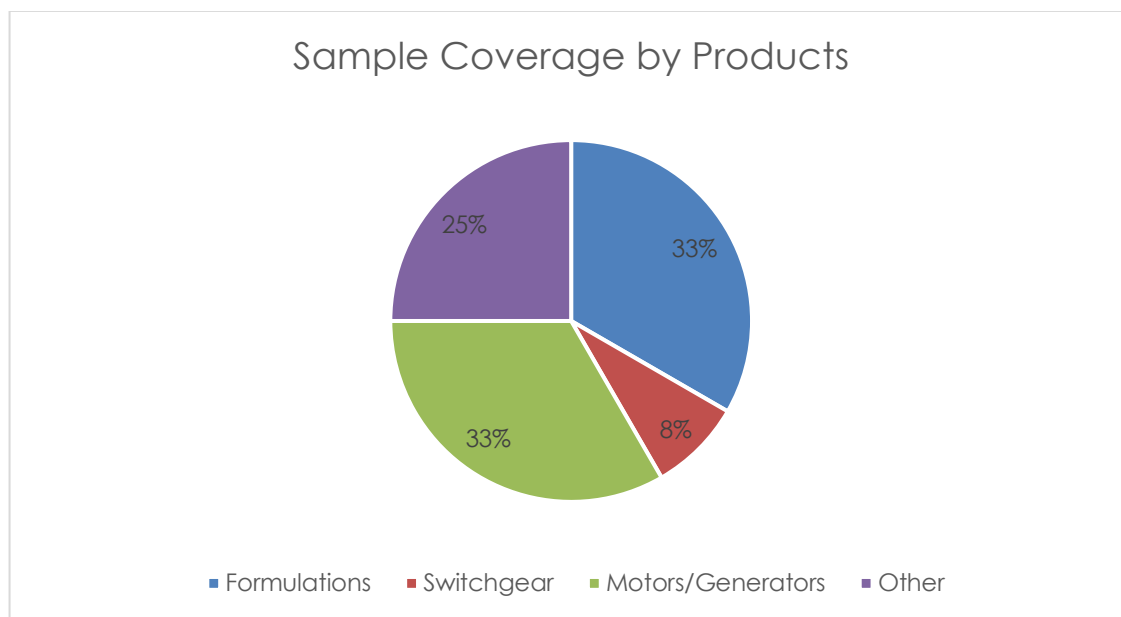


Figure 1: Sample coverage of products. Respondents: 24

Volumes Handled

The circulated survey allowed to gather information regarding the volumes of anhydrides handled in each facility. As such, and as available in Figures 2, 3 and 4, the most common range of volume for each of the compounds is under 100 tons per year.

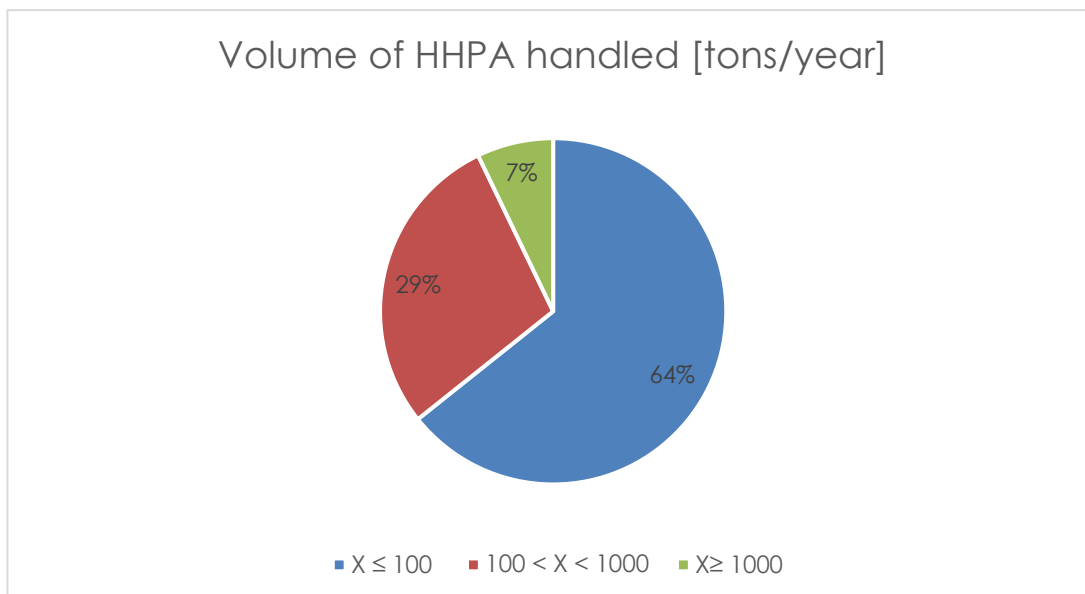


Figure 2: Percentage of volume ranges of HHPA handled in the respondents' facilities. Respondents: 14

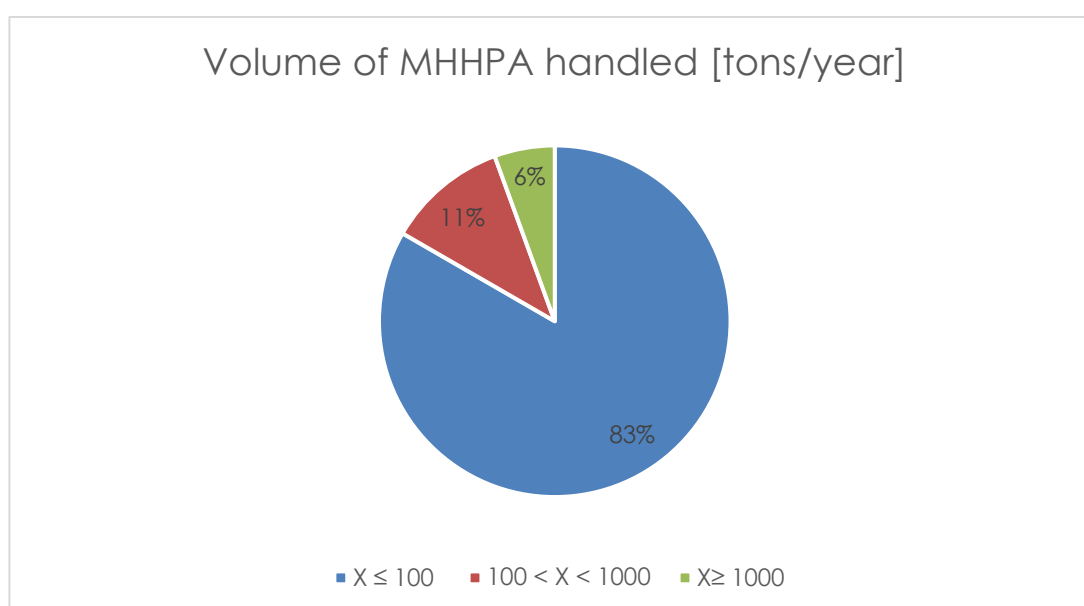


Figure 3: Percentage of volume ranges of MHPA handled in the respondents' facilities. Respondents: 18

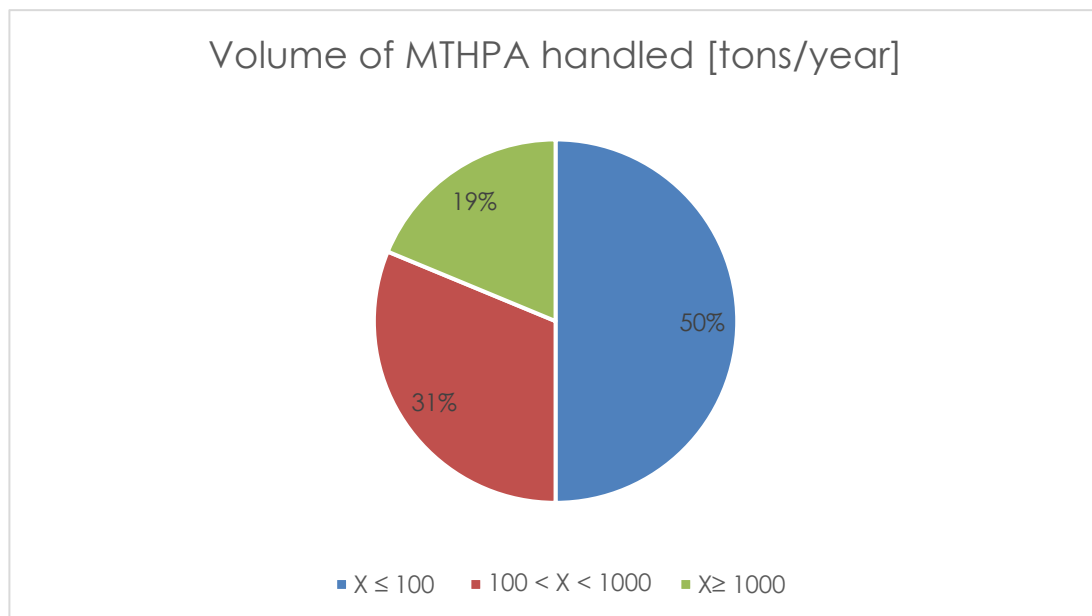


Figure 4: Percentage of volume ranges of MTHPA handled in the respondents' facilities. Respondents: 16

Location of facilities

Considering the Voluntary Commitment Signatories that answered to the 2025 survey, 83% of the facilities are located in the European Union, while 17% are located in a country not part of the European Union. This data is available in Figure 5.

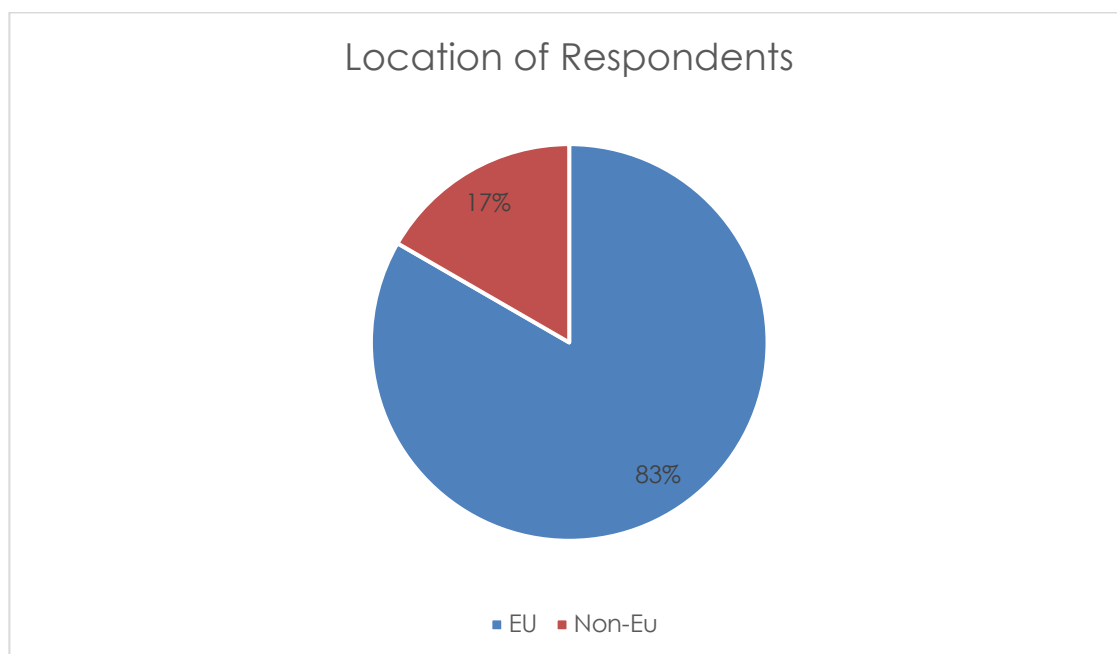


Figure 5: Representation of different products by companies reported the status of the implementation. Respondents: 24

AJIT Medical Diagnostic Guidance Implementation

Considering the results shown in Figure 6, 100% of the respondents indicated they have implemented the AJIT Medical Diagnostic Guidance or equivalent guidelines, e.g. national legislation.

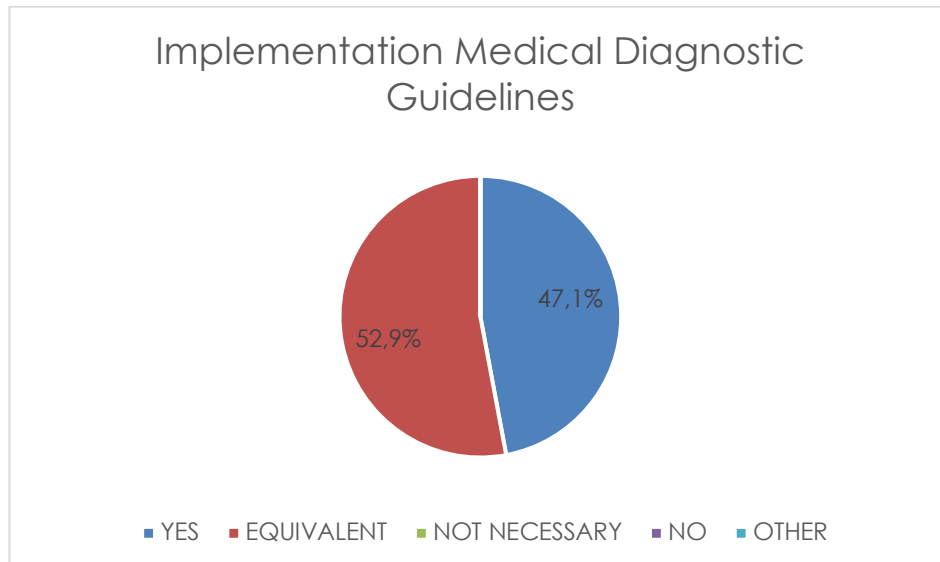


Figure 6. Reported Status of the Medical Diagnostic Guideline Implementation. Respondents: 17

AJIT Medical Diagnostic Reporting

On the topic of reporting the occupational cases of either asthma or rhinitis, 50% of the respondents haven't observed any occupational cases, while the other 28% have reported these cases to an authority or insurance agency. 22% of the respondents did not provide an answer to this question.

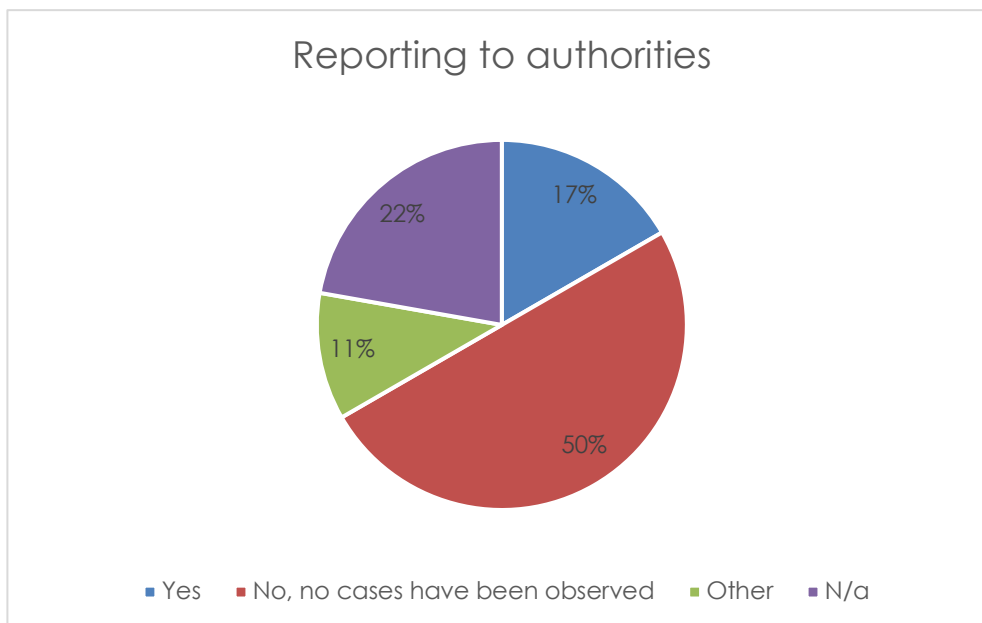


Figure 7. Reporting of occupational cases to authorities or insurance agencies. Respondents: 18

AJIT Workers' Training Programme Implementation

The most recent data on the workers' training programme implementation was collected in 2025 and is presented in the following section.

Over half of the plants surveyed indicated they have implemented the AJIT Workers' Training Programme (Figure 8). In addition, 33% of the plants surveyed haven't implemented the AJIT Workers' Training Programme as they are following National Training programmes or undergoing safety meetings. With only 8% of the respondents mentioning that they haven't implemented the AJIT's Workers' Training Programme.

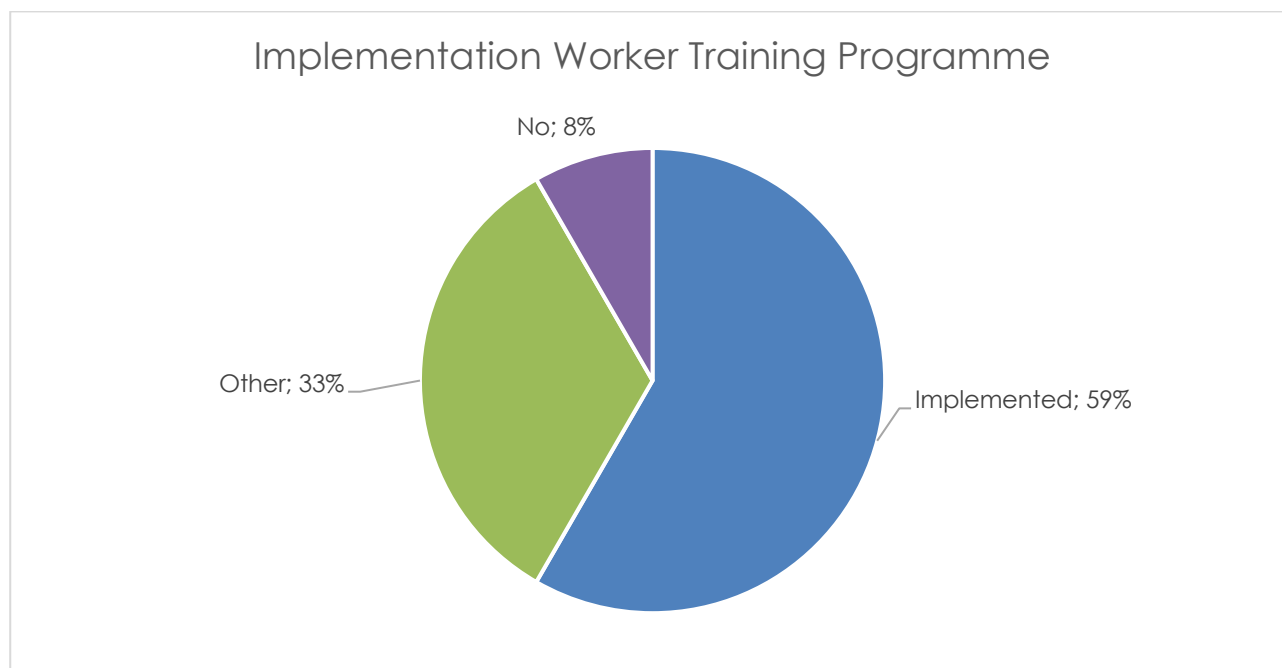


Figure 8. Reported Status Workers Training Programme Implementation. Respondents: 12

Implementation of Exposure Minimisation Measures (EMM)

Considering the implementation of minimisation measures in 2025, 72.7% of the respondents declared they have implemented measures to minimise the exposure. Only 9.1% percent of the respondents mentioned that they have not implemented EMM. The other 18.2% mentioned that either they did not implement EMM as they were not required due to the nature of the production site (e.g outdoor production plant with low exposure levels). This data is available in Figure 9.

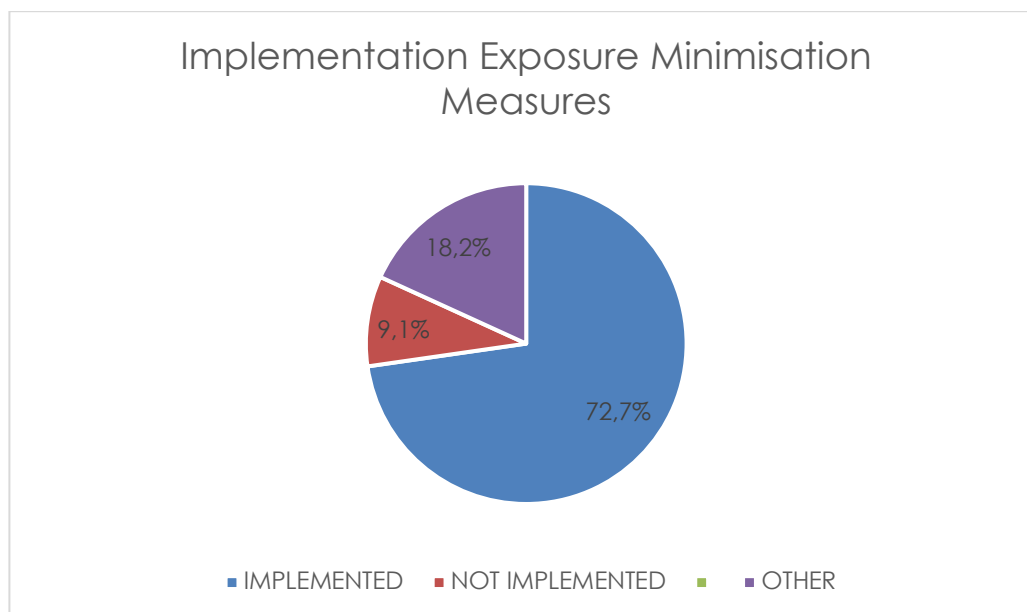


Figure 9. Implementation of Exposure Minimisation Measures. Respondents: 11

Exposure Minimisation Plan

Engineering controls

Of all involved sites, 36.4% declared that they have already implemented sufficient measures to control the exposure levels, these measures were based on:

- Implementation and optimisation of air ventilation systems, including local exhaust ventilation (LEV) and general ventilation capacity;
- Controlled access to impregnation areas, restricting entry to trained and authorised personnel only;
- Designation of cleaning zones for PPE to prevent contamination of the external environment;
- Minimisation of vapour leakage through regular cleaning of auxiliary materials and active ventilation;

- Replacement of electric motors in air extraction systems to double the suction capacity at the presses, channelling anhydrides towards exhaust hoods during mould opening;
- Process design to minimise time employees spend in environments that may contain anhydrides.

Furthermore, 36.4% of the respondents aim to introduce new engineering controls or are in the process of implementing them, namely:

- Ongoing focus on finding a replacement for MHHPA-epoxy resin together with the resin supplier;
- Ongoing CAPEX project to improve and optimise the processing of anhydrides;
- Venting of hardening furnaces to the outside and improvement of general ventilation system capacity combined with additional LEVs;
- Continuous monitoring and upgrading of existing closed loop systems.

Results are shown in Figure 10.

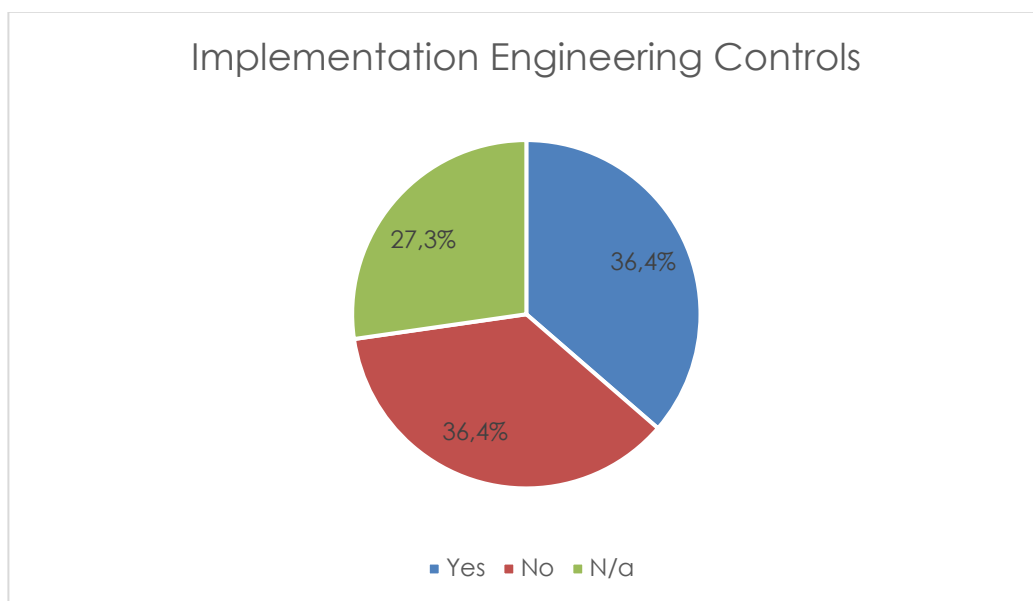


Figure 10. Implementation of engineering controls. Respondents: 11

Organisational measures

Of all signatory sites, figure 11, 56% declared that it is not necessary to implement additional organisational measures. No respondent considered necessary to implement additional measures.

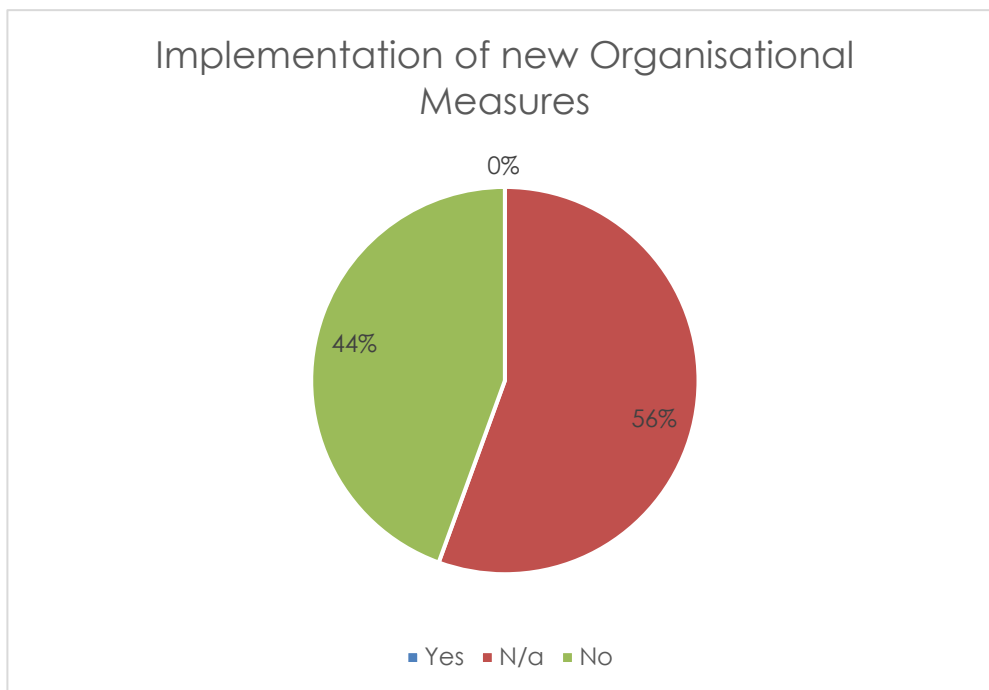


Figure 11. Distribution of responses regarding the implementation of new organisational measures. Respondents: 9

Personal protection measures

Of all signatory sites, 50% declared that it is not necessary to implement additional personal measures. These are sites where sufficient personal implementations have been performed and reported in the foregoing years' surveys. 10% of the respondents are planning to improve personal protection measures.

Results are shown in Figure 12.

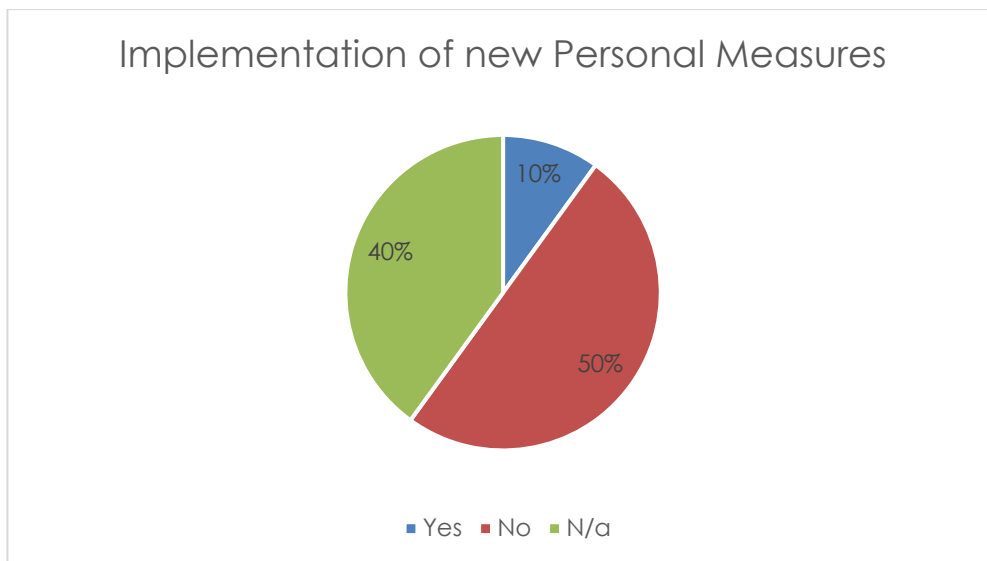


Figure 12. Implementation of new personal measurements. Respondents: 10

Medical data

Update of medical data

The following chapter is summarising the updated medical data from 2025. The information on medical data is collected annually through the submission of a retrospective medical survey.

In this questionnaire, two different occupational diseases were taken into account: occupational asthma and occupational rhinitis. The AJIT Medical Diagnostic Guidance defines the procedure to follow in order to assess the cases of occupational asthma and occupational rhinitis, as shown in the flowchart reported in Figure 13 and Figure 14, respectively. As shown in both flowcharts, the submission of the questionnaire is the first step for assessing possible cases of occupational diseases. In case of positive answers related to potential cases of asthma and rhinitis, specific medical tests have to be performed.

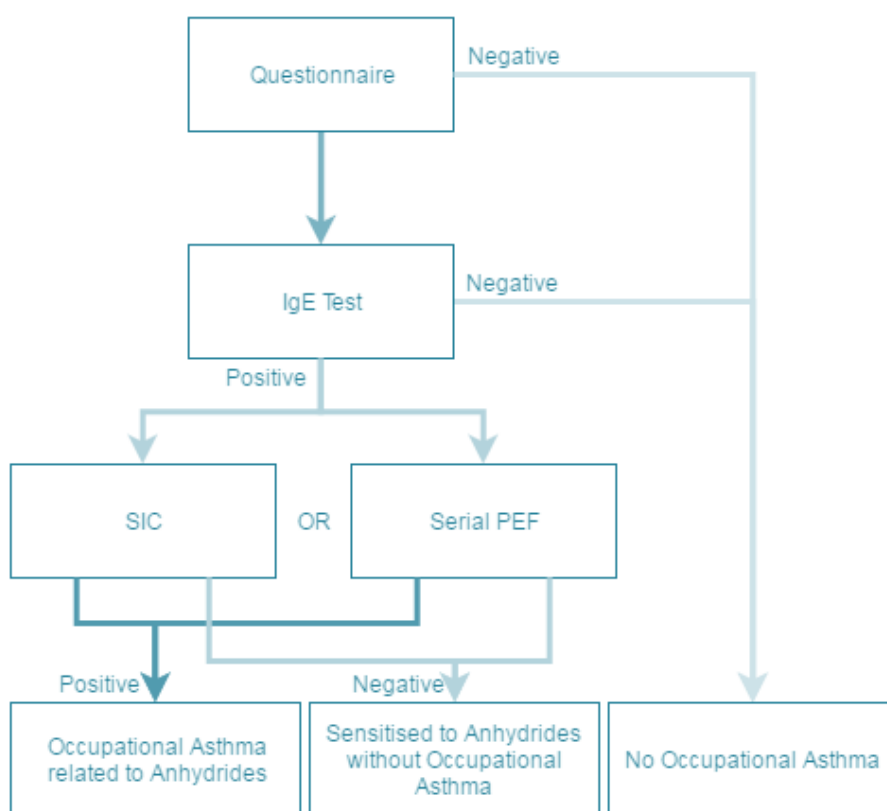


Figure 13. Protocol for assessing occupational asthma. SIC = Specific Inhalation Challenge and PEF = Peak Expiratory Flow.

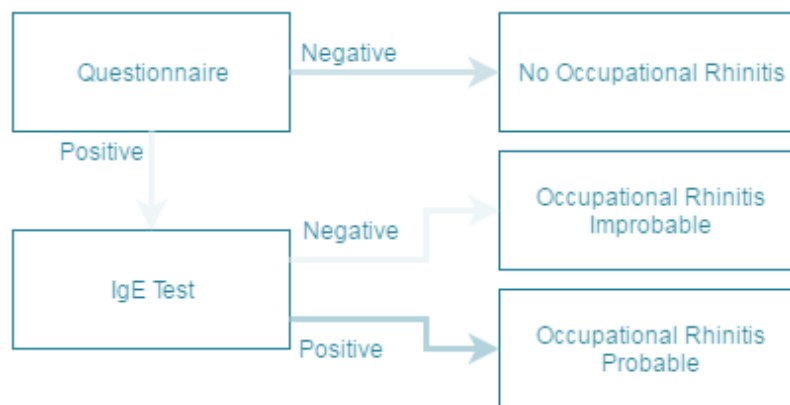


Figure 14. Protocol for assessing occupational rhinitis.

Results and discussion

As done on an annual basis, the medical survey was conducted where several points regarding the potential impact of anhydrides are assessed; i.e., number of potentially exposed workers, number of potentially exposed workers in the plant, the procedure followed for the medical check-up, number of cases of asthma and rhinitis reported among potentially exposed workers, the procedure followed to check if the cases of asthma and rhinitis found are occupational in nature and related to HHPA and MHPA exposure, number of cases of occupational asthma and rhinitis reported among potentially exposed workers, the procedure followed to check if workers are sensitized after exposure to Anhydrides, among others.

The results of the medical date survey of 2025 are shown in Table 1, with mention to the previously reported year of 2022-2023 and 2024.

Table 1. Total number of reported occupational cases of asthma and rhinitis among workers.

survey year	total number of workers	potentially exposed workers	cases of asthma/rhinitis (occupational or not, cumulated since the beginning of the recording)		occupational cases related to anhydride exposure under AJIT	
			asthma	rhinitis	asthma	rhinitis
2022 - 2023	12632	669	42*	76*	0	0
2024	12611	477	48*	94*	0	0
2025	10193**	418**	50*	97*	0	0

* most of these cases reported by a limited number of facilities.

** some facilities reported N/a for worker numbers; totals based on numeric entries only.

In 2025, 18 facilities reported 431 potentially exposed workers (numeric entries), which is equivalent to approximately 4% of the total number of workers reported. Of these, 50 cumulative cases of asthma (11.6%) and 97 cumulative cases of rhinitis (22.5%) were reported since the date of implementation of medical checks. These values are in line with the average values demonstrated for both asthma and rhinitis across the EU, 8.2%¹ and 23%², respectively.

Conclusion

Since its launch, the majority of AJIT members have actively implemented the Voluntary Commitment, reflecting a strong and sustained dedication to ensuring high standards of worker protection. The data collected highlights consistent progress in medical monitoring practices and the reduction of worker exposure among participating companies.

Beyond internal efforts, registrants have also pledged to leverage the mechanisms available under Article 39 of REACH, working to ensure that the standards applied through the Voluntary Commitment are also applied across the industry.

The 2025 survey shows continued progress in worker training and exposure control implementation, with 100% of respondents now having implemented the AJIT Medical Diagnostic Guidance or equivalent. Several facilities have implemented significant new engineering controls, including increased air extraction capacity, ventilation improvements, and process redesigns to minimise exposure.

On this basis, the AJIT remains confident that the measures presented in this risk management plan offer the most effective framework for controlling the risks linked to anhydride use.

¹ O. Selroos *et al.*, "National and regional asthma programmes in Europe," *European Respiratory Review*, vol. 24, no. 137, pp. 474–483, Aug. 2015, doi: <https://doi.org/10.1183/16000617.00008114>.

² V. Bauchau, "Prevalence and rate of diagnosis of allergic rhinitis in Europe," *European Respiratory Journal*, vol. 24, no. 5, pp. 758–764, Nov. 2004, doi: <https://doi.org/10.1183/09031936.04.00013904>.

Annex I List of AJIT Members



Participatory sponsors:

