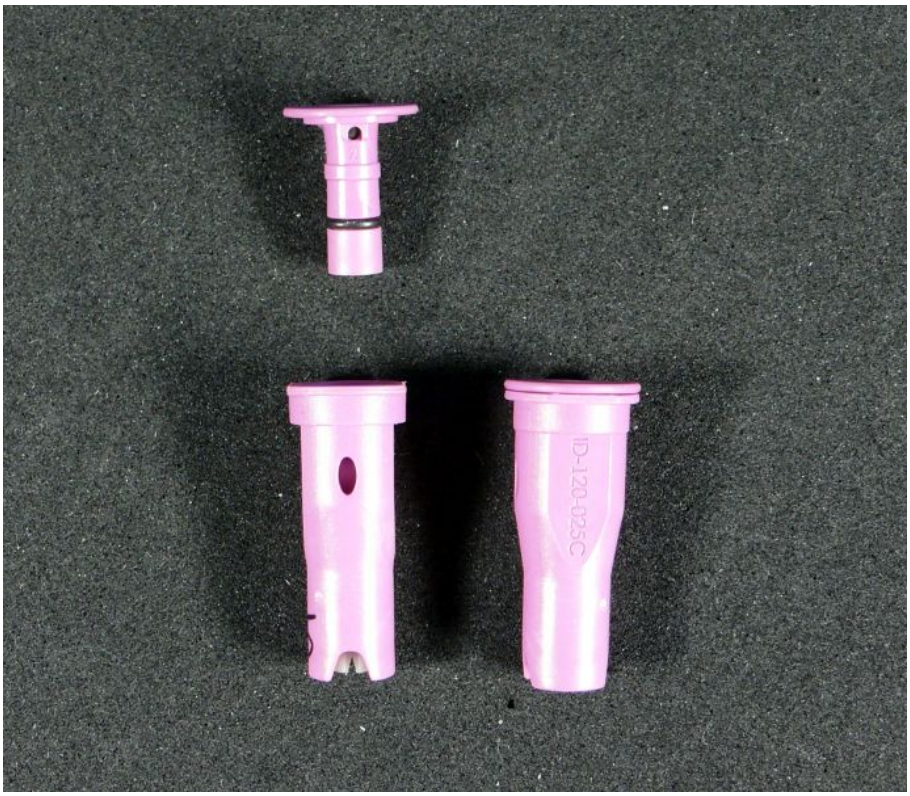
TEST REPORT

of the

Julius Kühn-Institut

Federal Research Institute
for Cultivated Plants, Braunschweig



Flatfan nozzle Lechler ID-120-025 C (ceramics, plastic-coated, lilac)

Approved for spraying field crops

Applicant and Manufacturer
Lechler GmbH
Präzisionsdüsen – Tropfenabscheider
Ulmer Strasse 128
72555 Metzingen

Approved on
10 January 2014

Institute for Application Technique in Plant Protection
Messeweg 11-12, 38104 Braunschweig

DOI: 10.5073/AT.2015.G1974en

Assessment

The flatfan nozzle Lechler ID-120-025 C (ceramics, plastic-coated, lilac) was tested without accessories. The nozzle is suitable for spraying field crops, provided that the following technical requirements are fulfilled:

1. Installation in a spray boom with a sufficient and a steady amount of liquid flow,
2. 500 mm nozzle spacing,
3. 50 cm between nozzles and spray target (consistency of eveness of cross distribution proved satisfactory at a distance range from 40 cm to 60 cm),
4. Spray pressure – measured in front of the nozzle – between 2.0 and 8.0 bar; liquid volume flow per nozzle as stated in table below.

Suitable precautions should be taken to assure that the nozzles do not get blocked up or drip when in use. The nozzles have a key width of 10 mm. The dimensions of the nozzle tip comply with standard ISO 8169. The colour coding of the nozzle comply with standard ISO 10625. For the application on the edges Lechler recommends the use of the nozzle IS 80-025 POM as last nozzle in the spray boom.

Pressure (bar)	Liquid flow volume without accessories (l/min)	Max. deviation of single nozzle flow from the dosage tables	Evenness of cross distribution at (cm) 40 / 50 / 60 (Vk %)	Droplet spectrum (BCPC-Standard)
2.0	0.77	3.27%	4.0 / 6.1 / 3.9	very coarse
3.0	0.97	-	4.5/ 3.6 / 5.5	very coarse
4.0	1.09	-2.96 %	5.7 / 4.3 / 2.4	very coarse
5.0	1.21	-	- / 3.3 / -	very coarse
6.0	1.33	4.33 %	- / 2.4 / -	very coarse
7.0	1.44	-	- / - / -	very coarse
8.0	1.54	2.78 %	- / 2.0 / -	coarse

Loss reducing properties
Included in the list „Loss reducing equipment“ (as of 23 March 2015)

Drift reducing classification	Type of equipment and drift reducing parts	Regulations for use
50 %	Fieldsprayers with Lechler ID-120-025 C	First 20 m from field edge spraying with max. 6.0 bar, nozzle height above target 50 cm.
75 %	Fieldsprayers with Lechler ID-120-025 C	First 20 m from field edge spraying with max. 4.0 bar, nozzle height above target 50 cm.
90 %	Fieldsprayers with Lechler ID-120-025 C	First 20 m from field edge spraying with max. 2.5 bar, nozzle height above target 50 cm.

Field test
The nozzles were used in the year 2014 on a total of 769 hectares, a sufficient effect of the plant protective measures was confirmed.

Basics for testing
The tests were carried out on basis of the Regulations for Testing Plant Protection Equipment (JKI-Guideline 2-1.1:2013) and of ISO 5682-1:1999. The requirements of ISO 16119-2:2013 and of JKI-Guideline 1-2.1:2013 were fulfilled.

Field testing:
Landesamt für ländliche Entwicklung
Landwirtschaft und Flurneuordnung
Pflanzenschutzdienst
Müllrosachaussee 54
15236 Frankfurt/Oder

Technical testing:
Institute for Application Technique in Plant Protection
Messeweg 11-12,
38104 Braunschweig