

Swiss TS Technical Services AG as a Conformity Assessment Body according to art. 15 of the "Verordnung über das Inverkehrbringen und die Marktüberwachung von Gefahrgutumschliessungen" (SR 930.111.4) grants the following design type approval:

Approval SwissTS 2799

of the packaging design type for the transport of dangerous goods,
 1. issue

This approval is based on the 4. issue of the approval CH 2799 dated 12.06.2003

Applicant	Müller AG Verpackungen Tramstrasse 20 CH – 4142 Münchenstein
Holder of the approval	Müller AG Verpackungen Tramstrasse 20 CH – 4142 Münchenstein
Your order	dated 05.12.2014
Your reference	Test report 14.004
Our reference	SM 211531 / HOS
Object	Salvage packaging, code 1A2T, nominal capacities 307 and 425 litres
Manufacturer	Müller AG Verpackungen CH – 4142 Münchenstein

1. Legal base and transport regulations

ADR	Europäisches Übereinkommen über die internationale Beförderung gefährlicher Güter auf der Strasse.
SDR	Verordnung über die Beförderung gefährlicher Güter auf der Strasse.
RID	Ordnung für die internationale Eisenbahnbeförderung gefährlicher Güter.
RSD	Verordnung für die schweizerische Eisenbahnbeförderung gefährlicher Güter.
ICAO-TI	International Civil Aviation Organisation: Technical Instruction for the safe transport of dangerous goods by air.
IATA-DGR	International Air Transport Association: Dangerous Goods Regulation
IMDG-Code	International Maritime Dangerous Goods Code.
GGUV	Verordnung über das Inverkehrbringen und die Marktüberwachung von Gefahrgutumschliessungen

2. Performed tests

2.1 Drop test

drop height [m]	2,7
gross mass [kg]	333

2.2 Stacking test

stacking load [kN]	13,5
test time [h]	24

2.3 Leakproofness test (with air)

test pressure [kPa]	30
test time [min]	5

2.4 Internal pressure (hydraulic) test

test pressure [kPa]	600
test time [min]	5

2.5 Penetration test

drop height (bar) [m]	1,0
mass (bar) [kg]	6,0
diameter (bar) [mm]	32

3. Description of the design type

3.1 Type

kind of packaging	1A2T
designation by manufacturer	Salvage packagings 307 and 427 litres

3.2 Dimensions

height [mm]	1002 and 1346
inner diameter [mm]	650
outer diameter [mm]	710
wall thickness [mm]	bottom: 1,5 body: 1,25
nominal capacity [l]	307 and 427

3.3 Material type

drum	ER 1.4301 or 1.4435 or 1.4571
closing ring	Steel DD1 (St W22)
support ring	ER 1.4301
gasket	O-ring, Ø 9x631 mm, EPDM (50 ShA)
insert ring	ER 1.4301, Ø 9x653

3.4 Closures

closures in the top	G2 and G¾
torque [Nm]	G2: 25, G¾: 15
gaskets	optional PE / EPDM / nitrile rubber / PTFE

3.5 Tara and max. gross mass

tare mass [kg]	48 and 56
max. admissible gross mass [kg]	450

3.6 Documents to consider

- Test report Lf.No. 14.004 dated 03.12.2014 and 29.01.2015, Müller AG Verpackungen, CH – 4142 Münchenstein

- Drawings No E3-97008b, E3-98002b, EZ4-98001, EZ4-98002, EZ4-98003, EZ4-98004b, EZ4-98005b, EZ4-98006b, EZ4-98007a, EZ4-98008a, EZ4-98009, EZ4-98010, EZ4-98011, EZ4-98012 and EZ4-97012b, Müller AG Verpackungen, CH – 4142 Münchenstein
This test report supplements the present approval.

4. Scope of application

4.1 Contents and packing group

The packagings may be used as salvage packagings for solid or liquid products of the packing group I, II or III or for packagings containing such products.

4.2 Compatibility

The packagings may be used only for those dangerous goods, for which the compatibility with the packaging material, including closures, is guaranteed evidently.

5. Further requirements / conditions

5.1 Conformity with the test samples

The design type of packagings produced in series shall conform totally with the approved type, tested according to the report(s) mentioned under paragraph 3.6.

5.2 Permissible use of packagings

Packagings produced in accordance with the approved design and marked accordingly to paragraph 6 may be used for dangerous goods, if these packagings are allowed for these goods in regulations/directives of the legal base and transport regulations as named under paragraph 1.

5.3 Limitations

The following maximum values for the packaging resp. for the content shall not be exceeded:

Density [kg/l]	1,8	
Vapour pressure [kPa]	400	50°
	466	55°

5.4 Series production of packagings

The production of packagings in series according to the standard EN ISO 16106 shall follow a quality assurance programme accepted by the federal office of transport (FOT) or by a monitoring body recognized by FOT.

The observance of the quality assurance programme will be inspected by Swiss TS or by an expert admitted by Swiss TS.

5.5 Conditions / Use of other packaging components

The applicant shall guarantee evidently, that all conditions concerning the use of the packagings are known to the user/packer.

In case other packaging components are used, than those mentioned in the approval and amendments, the approval could become invalid.

For design type modifications the holder of the approval has to apply for acceptance by an authorised conformity assessment body.

6. Marking

The marking shown below must be affixed to the packaging:

UN 1A2T / X450 / S / year of manufacturing^{*)} / CH / 2799 – M

UN 1A2W / X450 / S / year of manufacturing^{*)} / CH / 2799 – M

UN 1A2W / X1.8 / 600 / year of manufacturing^{*)} / CH / 2799 – M

*) to be substituted by last two digits of the year of manufacturing

Requirements of the transport regulations RID, ADR and IMDG-Code, paragraph 6.1.3 and ICAO-TI, paragraph 6, with reference to marking and height of the letters shall be respected.

7. Approval

Above described packagings are approved for the transport of dangerous goods based on the results of the additional design type tests.

The additional design type tests were carried out in accordance with the requirements given by the legal base and the transport regulations listed in paragraph 1 of this amendment to the approval, valid at the time this amendment of the approval was issued.

This approval is valid until 31.12.2024.

In case of deviations of the produced packagings in series from the design type the approval with this amendment may be revoked at any time.

In case of changes of the transport regulations the holder of the approval has to apply for the necessary modifications of this approval.

Wallisellen, 02.02.2015

Swiss TS Technical Services AG



Dr. Silke Holzinger