BRL-K14034

2025-08-26

Evaluation Guideline

for the Kiwa product certificate for Emergency safety showers



Trust
Quality
Progress

Preface Kiwa

This Evaluation Guideline (BRL) has been accepted by the Kiwa Board of Experts (CWK), in which all relevant parties in the field of emergency safety showers are represented. This Board of Experts also supervises the certification activities and will adjust this BRL if required. All references to Board of Experts in this evaluation guideline pertain to the above mentioned Board of Experts.

This evaluation guideline will be used by Kiwa in conjunction with the Kiwa Regulations for Certification, which include the general rules employed by Kiwa for its certification activities.

Kiwa Nederland B.V.

Sir Winston Churchilllaan 273 Postbus 70 2280 AB RIJSWIJK

Telephone: Tel. +31 88 998 44 00 NL.Kiwa.info@Kiwa.com www.kiwa.com

© 2024 KIWA N.V.

All rights reserved. No part of this report may be reproduced, stored in a database or retrieval system, or published, in any form or in any way, electronically, mechanically, by print, photoprint, microfilm or any other means without prior written permission from the publisher.

The use of this Evaluation Guideline by third parties, for any purpose whatsoever, is only allowed after a written agreement is made with Kiwa to this end.

Binding declaration

This evaluation guideline has been declared binding by Kiwa effective [2025-08-26].

Content

	Preface Kiwa	1
	Content	2
1	Introduction	4
1.1	General	4
1.2	Field of application / scope	4
1.3	Acceptance of tests reports provided by the supplier	4
1.4	Quality declaration	4
2	Terminology	5
2.1	Definitions	5
3	Procedure for obtaining a quality declaration	6
3.1	Initial investigation	6
3.2	Granting the certificate	6
3.3	Investigation into the product and/or performance requirements	6
3.4	Production process assessment	6
3.5	Contract assessment	6
4	Product requirements	7
4.1	General	7
4.2 4.2.1	Regulatory requirements Suitability for contact with drinking water	7 7
4.3	Private law requirements	7
4.3.1 4.3.2	Product requirements Additional product requirements	7 7
4.3.2.1	Corrosion resistance	7
4.3.2.2 4.3.2.3	Coatings Safety device	7 8
5	Markings	9
5.1	General	9
5.2	Certification mark	9
6	Requirements in respect of the quality system	10
6.1	Manager of the quality system	10
6.2	Internal quality control/quality plan	10
6.3	Management of test and measuring equipment	10
6.4	Procedures and working instructions	10

II	Model IQC Scheme (example)	18
I	Model certificate (example)	17
9.2	Standards / normative documents	16
9.1	Public law rules	16
9	Titles of standards	16
8.10	Specific rules set by the Board of Experts	15
8.9	Interpretation of requirements	15
8.8	Report to the Board of Experts	15
8.7	Temporarily no production or delivery	15
8.6 8.6.1 8.6.2	Nonconformities Serverity of nonconformities Follow-up nonconformities	14 14 14
8.5	Nature and frequency of third party assessments	14
8.4	Decision for granting the certificate and/or imposition of measures	13
8.3	Report on Initial investigation	13
8.2 8.2.1 8.2.2	Certification staff Competence criteria certification staff Qualifications Certification staff	12 12 13
8.1	General	12
8	Agreements on the implementation of certification	12
7.2	Inspection of the quality system	11
7.1	Test matrix	11
7	Summary of tests and inspections	11
6.5	Other requirements of the quality system	10

1 Introduction

1.1 General

The requirements included in this evaluation guideline will be employed by Kiwa when dealing with an application and the maintenance of a product certificate for emergency safety showers.

This BRL replaces BRL-K14034/01, dated 12-05-2017. Quality declarations issued on the basis this BRL will remain valid after this BRL has been declared binding.

When carrying out certification activities, Kiwa is bound by the requirements laid down in NEN-EN ISO/IEC 17065.

1.2 Field of application / scope

Emergency safety showers are intended for installation in areas where people are working in a hazardous environment and shall provide a sufficient supply of water against fire or chemical substances when needed.

The emergency safety showers can be applied in drinking water installations with a maximum static water pressure of 1000 kPa and a maximum water temperature of 70 °C. The recommended limits for correct operation are a dynamic pressure between 100 kPa and 500 kPa and an outgoing water temperature between 15 °C and 37 °C.

1.3 Acceptance of tests reports provided by the supplier

With regard to the requirements included in this evaluation guideline, the applicant, in the view of third party assessments, can submit conformity reports issued by evaluation bodies to prove that the requirements of this BRL are being met. It will have to be demonstrated that the relevant inspection, analysis, test, and/or evaluation reports have been prepared by an institution that meets the corresponding applicable accreditation standard, namely:

- NEN-EN-ISO/IEC 17020 for inspection bodies,
- NEN-EN-ISO/IEC 17021-1 for certification bodies certifying management systems,
- NEN-EN-ISO/IEC 17024 for certification bodies certifying persons,
- NEN-EN-ISO/IEC 17025 for laboratories,
- NEN-EN-ISO/IEC 17065 for certification bodies certifying products, processes, and services.

Remark:

This requirement is considered to be fulfilled when a certificate of accreditation can be shown, issued either by the Board of Accreditation (RvA) or by one of the institutions with which an agreement of mutual recognition and acceptance of accreditation has been concluded by the Board of Accreditation. If no certificate of accreditation can be submitted, the certification institution itself will verify if the accreditation criteria have been met.

1.4 Quality declaration

The quality declarations to be issued by Kiwa based on this evaluation guideline will be referred to as Kiwa product certificate.

A model of the product certificate has been included for information purposes as Annex.

2 Terminology

2.1 Definitions

In this evaluation guideline, the following terms and definitions apply:

- Evaluation Guideline (BRL): The agreements made by the Board of Experts on the subject of certification:
- Certification mark: a protected trademark of which the authorization of the use is granted by Kiwa to the supplier whose products can be considered to comply on delivery with the applicable requirements;
- Board of Experts: the Board of Experts Watercycle (CWK);
- Follow-up investigation: the investigation carried out after granting the
 certificate to determine that the certified products and/or approved quality related
 processes continue to be in compliance with the requirements laid down in the
 evaluation guideline;
- Drinking water: water intended or partly intended for drinking, cooking or food
 preparation or other domestic purposes, excluding hot tap water, which is made
 available by pipeline to consumers or other customers (source Dutch drinking
 water act);
- Drinking water installation: an installation directly or indirectly connected to the public drinking water distribution network of a drinking water company (source Dutch Drinking Water Act);
- Installation: configuration consisting of the pipe work, fittings, and appliances;
- IQC scheme: a description of the quality inspections carried out by the supplier as part of his quality system;
- Supplier: the party that is responsible for ensuring that the products meet and continue to meet the requirements on which the certification is based;
- Private Label Certificate: A product certificate that only pertains to products that
 are also included in the product certificate of another supplier that has been
 certified by Kiwa, the only difference being that the products and product
 information of the private label holder bear a brand name that belongs to the
 private label holder.
- Product certificate: a document in which Kiwa declares that a product may be deemed, on delivery, to comply with the product specification recorded in the product certificate;
- Product/Process requirements: requirements made specific by means of measures or figures, focusing on (identifiable) characteristics of products and containing a limiting value to be achieved, which can be calculated or measured in an unequivocal manner.
- **Initial investigation:** The initial evaluation of the supplier and the investigation of the relevant products for the first issuance of a certificate.

3 Procedure for obtaining a quality declaration

3.1 Initial investigation

The initial investigation to be performed based on the (product) requirements as contained in this evaluation guideline, including the test methods, depending on the type of product(s) to be certified:

- a (type) testing to determine whether the products comply with the product and/or performance requirements;
- · production process assessment;
- assessment of the quality system and the IQC scheme;
- verification on the presence and functioning of the further required procedures.

3.2 Granting the certificate

After completing the initial investigation, the results are presented to the Decision maker (see § 9.2). This person evaluates the results and decides whether the certificate can be granted or if additional data and/or tests are necessary before the certificate can be granted.

3.3 Investigation into the product and/or performance requirements

Kiwa will investigate the products to be certified against the certification requirements as stated in this evaluation guideline or will have them investigated on its behalf. The required samples will be drawn by or on behalf of Kiwa.

3.4 Production process assessment

When assessing the production process, it is investigated whether the producer is capable of continuously producing products that meet the certification requirements. The evaluation of the production process takes place during the ongoing work at the producer.

The assessment will at least include:

- The quality of raw materials, semi-finished products, and end products:
- Internal transport and storage.

3.5 Contract assessment

If the supplier is not the producer of the products to be certified, Kiwa will assess the agreement between the supplier and the producer.

This written agreement, which is available to Kiwa, must at least include:

That accreditation bodies, scheme managers and Kiwa will be given the opportunity to observe the certification activities carried out by Kiwa or on behalf of Kiwa at the producer.

4 Product requirements

4.1 General

This chapter describes the requirements emergency safety showers shall meet, as well as the determination methods to establish that the requirements are being met.

4.2 Regulatory requirements

4.2.1 Suitability for contact with drinking water

Products and materials that (may) enter into contact with drinking water or warm tap water, shall not release substances in quantities that may be harmful for the health of the consumer or affect the quality of the water in any other way. Therefore the products or materials must comply with the toxicological, microbiological, and organoleptic requirements laid down in the Ministerial Regulation on the Materials and Chemicals for Drinking and Warm Water Supply ("Ministeriële Regeling materialen en chemicaliën drink- en warm tapwatervoorziening") published in the Government Gazette. This means that the procedure for obtaining a recognised quality declaration, as referred to in the current Regulations, has to be concluded with a positive result. Products or materials that are provided with a quality declaration, issued by, for example, a foreign certification body, may also be used in the Netherlands, provided that this quality declaration has been declared equivalent by the Minister to the quality declaration as referred to in the Regulation.

4.3 Private law requirements

4.3.1 Product requirements

The requirements of the product are specified in the applicable standard as mentioned below, with exception of the aspects where requirements are specified in § 4.3.2.

EN 15154-1: 2006 "Emergency safety showers - Part 1: Plumbed-in body showers for laboratories".

EN 15154-2: 2006 "Emergency safety showers - Part 2: Plumbed-in eye wash units".

4.3.2 Additional product requirements

In addition to the requirements specified in § 4.3.1, the following applies:

4.3.2.1 Corrosion resistance

The applied materials shall be corrosion resistant or protected against corrosion. The materials used may not have an adverse effect on each other.

4.3.2.2 Coatings

Applied metallic or plastic anticorrosive protection layers shall fulfil the requirements of EN 248.

Evaluation Guideline© Kiwa Nederland B.V.
- 7 - 2025-08-26

¹ The "Regulation" states (Article 16): "A quality declaration issued by an independent certification body in another Member State of the European Union or in another state that is party to the Agreement on the European Economic Area is equivalent to a recognised quality declaration, insofar as in the opinion of the Minister, the first mentioned quality declaration evidences that at least equivalent requirements as referred to in this regulation are being met."

4.3.2.3 Safety device

Emergency safety showers shall be provided with a controllable backflow prevention device in accordance with the requirements of BRL-K629, including EN 13959, for family E, type A. This check valve shall be placed upstream of the closing device.

5 Markings

5.1 General

The products shall be marked with the following indelible marks and indications:

• brand name and/or registered trademark

5.2 Certification mark

After entering into a Kiwa certification agreement, the certified products shall be clearly and indelibly marked with the certification mark "KIWA **.

6 Requirements in respect of the quality system

This chapter contains the requirements that have to be met by the supplier's quality system.

6.1 Manager of the quality system

Within the supplier's organizational structure, an employee who will be in charge of managing the supplier's quality system must have been appointed.

6.2 Internal quality control/quality plan

The supplier shall have an internal quality control scheme (IQC scheme) which is applied by them.

The following must be demonstrably recorded in this IQC scheme:

- · which aspects must be inspected by the supplier;
- according to what methods such inspections are carried out;
- how often these inspections are carried out;
- in what way the inspection results are recorded and kept.

This IQC scheme should at least be an equivalent derivative of the model IQC scheme as shown in the Annex.

6.3 Management of test and measuring equipment

The supplier shall verify the availability of necessary test and measuring equipment for demonstrating the products conformity with the requirements in this evaluation quideline.

If and when required, the test and measuring equipment shall be calibrated at specified intervals.

The supplier shall record and evaluate the validity of the previous measuring data if at the time of calibration it is established that the equipment is not functioning properly. The measuring equipment in question must carry an identification that allows for determining the calibration status.

The supplier shall record the results of the calibration.

6.4 Procedures and working instructions

The supplier shall be able to submit the following:

- procedures for:
 - o dealing with products showing deviations;
 - o corrective actions to be taken if non-conformities are found;
 - o dealing with complaints about products and/or services delivered;
- the working instructions and inspection forms used.

6.5 Other requirements of the quality system

The supplier must be able to submit the following:

- the organisation's organogram;
- the qualification requirements of the staff involved.

7 Summary of tests and inspections

This chapter contains an overview of the steps required for certification:

- **initial investigation**: the investigation to determine that compliance is given to all the requirements laid down in the evaluation guideline;
- **follow-up investigation:** the investigation carried out after granting the certificate to determine that the certified products continue to be in compliance with the requirements laid down in the evaluation guideline; the required frequency for the follow-up investigation by the certification body (CI) is also specified;
- inspection of the quality system of the supplier: monitoring compliance of the IQC scheme and procedures.

7.1 Test matrix

Description of requirement	Article	Investigation within the scope of		
	BRL- K14034 / EN 15154	Pre- certification	Supervision after certificate is granted ^{a) b)}	
Product requirements (BRL-K14034)				
Requirements to prevent harmful effects on the quality of drinking water	4.2.1	Х	Х	
Certification mark	5		Х	
Product requirements (EN 15154-1)				
Flow rate of water	4.1	X	Χ	
Water distribution	4.2	X	X	
Installation height	5.1	Χ		
Free space	5.2	Χ		
Valve	6	X	X	
Shower head	7	Χ	Χ	
Manufacturer's information	8	X		
Marking	9	X		
Product requirements (EN 15154-2)				
Flow rate of water	4.1	Х	Х	
Jet height	4.2	Χ	Χ	
Design requirements for installation	5	X		
Valve	6	X	X	
Outlet Nozzle(s)	7	X		
Manufacturer's information	8	X		

- a) In case of product or production process changes, it shall be determined again in consultation between the supplier and Kiwa, if the products comply with the performance requirements.
- b) During the follow-up investigation, the inspector will inspect the products by means of a selection of the above mentioned marked product requirements. The frequency of the follow-up visits is defined in § 8.5 of this BRL.

7.2 Inspection of the quality system

The supplier's quality system will be assessed by Kiwa based on the IQC scheme. The inspection contains at least those aspects mentioned in chapter 6.

8 Agreements on the implementation of certification

8.1 General

The certification body must have a procedure in place in which the general regulations used for certification are established.

8.2 Certification staff

The staff involved in the certification may be sub-divided into:

- Certification assessor/Reviewer (CAS/RV): in charge of carrying out the design and documentation evaluations, pre-certification tests, initial investigations, and evaluation of applications and reviewing conformity assessments.
- Site assessor (SAS): in charge of carrying out external inspections at the supplier's works;
- Decision maker (DM): in charge of taking decisions in connection with the precertification tests carried out, continuing the certification based on the inspections carried out and taking decisions on the need to take corrective actions.

8.2.1 Competence criteria certification staff

The competence criteria for the implementing certification staff are laid down in the following table. The competence of the certification staff involved must have been demonstrably recorded.

Basic competences	Evaluation criteria
Knowledge of company processes.	Relevant work experience
Skills for conducting professional	SAS, CAS/RV: 1 year
assessments on products, processes,	DM : 5 years, including 1 year related to certification
services, installations, design, and	Relevant technical knowledge and experience at the
management systems.	level of:
	SAS: High school
	CAS/RV, DM: Bachelor
Skills with regard to site assessments to be	SAS: Kiwa Assessment training or equivalent and 4
performed	site assessments including 1 supervised self-reliant
Adequate communication skills	assessment.
(e.g. writing reports, presentation skills and	
interviewing skills).	
Execution of Initial Investigation	CAS: 3 initial assessments under supervision.
Conducting reviews	RV: evaluation of 3 reviews

Technical competences	Evaluation criteria
Education	General: Education in one of the following technical areas: a) Mechanical Engineering; b) Engineering.
Testing skills	General: o 1 week laboratory training (general and scheme specific) including measuring techniques and conducting tests under supervision; d) Conducting tests (per scheme).

Experience – specific	CAS
	 3 complete applications (excluding the initial assessment of the production site) under the direction of the PM. 1 complete application self-reliant (to be evaluated by PM). 3 initial assessments of the production site under
	the direction of the PM .
	 1 complete application self-reliant (to be evaluated by PM).
	SAS
	e) 4 inspection assessments together with a qualified SAS.
	f) 1 inspection assessment self-reliant (evaluated by PM).
Skills in	PM
performing witnessing	Internal training witness testing

Legenda:

- Product manager: (PM)
- Site assessor (SAS)
- Certification assessor (SAS)
- Reviewer (RV)
- Decision maker (DM)

8.2.2 Qualifications Certification staff

The qualification of the Certification staff shall be demonstrated by means of assessing the education and experience to the above mentioned requirements. In case staff is to be qualified on the basis of deflecting criteria, written records shall be kept.

The authority regarding qualifications shall be recorded in the quality assurance system of the certification body.

8.3 Report on Initial investigation

The certification body records the results of the initial investigation in a report. This report shall comply with the following requirements:

- completeness: the report provides a verdict about all requirements included in the evaluation guideline;
- traceability: the findings on which the verdicts have been based shall be recorded and traceable;
- basis for decision: the DM shall be able to base their decision on the findings included in the report.

8.4 Decision for granting the certificate and/or imposition of measures

The decision for granting the certificate or the imposition of measures with regard to the certificate shall be based on the results recorded in the file.

The results of an initial investigation and a periodic assessment (in case of critical non-conformities) must be assessed by a reviewer.

Based on the performed review, the decision maker will decide if:

- The certificate can be granted,
- · Sanctions are imposed,
- The certificate shall be suspended or revoked.

The reviewer and the decision maker shall not have been involved in the preparation of the results based on which the decision is being made.

The decision shall be recorded in a traceable manner.

8.5 Nature and frequency of third party assessments

The certification body shall carry out surveillance assessments on site at the supplier to verify compliance with their obligations. The Board of Experts decides on the frequency of assessments.

At the time this BRL entered into force, the frequency of assessments amounts to two on site assessments per year for suppliers with a quality management system in accordance with ISO 9001 for their production, which has been certified by an acknowledged body (in accordance with ISO/IEC 17021) and where the IQC scheme forms an integral part of the quality management system.

In case the supplier does not have a quality management system in accordance with ISO 9001 (issued by Kiwa or any other accredited certification body), the frequency is increased to three assessment visits for the duration of one year.

An overview of the assessments to be performed by the certification body is given in the test matrix and must cover at least:

- the product specifications laid down in the certificate:
- · the production process of the products;
- the supplier's IQC Scheme and the results of the inspections performed by the supplier;
- the correct way of applying markings to the certified products;
- compliance with the required procedures;
- · dealing with complaints about delivered products.

For suppliers with a private label certificate, the frequency of assessments for the products covered by this certificate is established at 1 assessment per year. The assessments are conducted at the site of private label holder and focused on the aspects inserted in the IQC scheme and the results of the control performed by the private label holder. The IQC scheme of the private label holder shall at least refer to:

- the correct way of applying markings to the certified products;
- compliance with required procedures for receiving and final inspection;
- the storage of products and goods;
- dealing with complaints about delivered products.

The results of each assessment shall be recorded by Kiwa in a traceable manner in a report.

8.6 Nonconformities

When the certification requirements are not met, measures are taken by Kiwa in accordance with the sanctions policy as written in the Kiwa Regulation for Certification. The Kiwa Regulation for Certification and the Sanctions Policy are available page on the Kiwa website.

The following applies with regards to the relevance, follow-up of nonconformities, and the sanctions policy.

8.6.1 Serverity of nonconformities

The severity of the issued nonconformity in relation to the assessment conducted after granting the product certificate by certification body can be differentiated as follows:

- Nonconformities entitled as critical are deviations that can directly affect the quality and/or performance of product.
- Other nonconformities (non-critical nonconformities).

8.6.2 Follow-up nonconformities

The follow-up procedure for nonconformities by a certification body is as follows:

- The certification body shall be able to deal with critical nonconformities within the time frame established by the certification body, but shall not exceed the maximum term of 1 month.
- The certification body shall be able to deal with non-critical nonconformities within the time frame established by the certification body, but shall not exceed the maximum term of 3 months.

8.7 Temporarily no production or delivery

In case (temporarily) no products are being produced and/or delivered, upon a decision by the Board of Experts for a period longer than 2 years, at the request of the certificate holder, the validity of their certificate can be declared dormant. Such a dormant status can be granted by the certification body for a total maximum of 5 years.

The certificate holder is entitled to request earlier termination of the dormant period. If the dormant period is expected to exceed 2 years before reactivation of production and delivery in accordance with the product certificate, an additional assessment shall be performed to verify if all the evaluation guideline's requirements are still being met and if the inactive status can be converted into an active status.

The conditions of the dormant period will affect the imposed frequency for 3rd party assessments as specified in § 8.5.

8.8 Report to the Board of Experts

The certification body shall report at least annually about the performed certification activities. In this report the following aspects shall be included:

- mutations in number of issued certificates (granted/withdrawn);
- number of executed assessments in relation to the established minimum:
- · results of the inspections;
- · measures imposed in case of nonconformities;
- · complaints received from third parties about certified products.

8.9 Interpretation of requirements

The Board of Experts may record the interpretation of requirements of this evaluation guideline in one or more separate interpretation document(s). This or those interpretation documents will be available to the members of the BoE, the certification bodies, and the certificate holders who are active based on this evaluation guideline. This or those interpretation documents will be published on the Kiwa website.

8.10 Specific rules set by the Board of Experts

The Board of Experts may define the following specific rules. These rules shall be followed by the certification body when performing their certification activities.

9 Titles of standards

9.1 Public law rules

BJZ2011048144 Regulation from the State Secretary for Instructure and

June 29, 2011 Environment¹

9.2 Standards / normative documents

Number	Title	Version *
NEN-EN-ISO/IEC 17020	Conformity assessment - General criteria for the operation of various types of bodies performing inspection	
NEN-EN ISO/IEC 17021	Conformity assessment - Requirements for bodies providing audit and certification of management systems	
NEN-EN-ISO/IEC 17024	Conformity assessment - General requirements for bodies operating certification of persons	
NEN-EN-ISO/IEC 17025	General requirements for the competence of testing and calibration laboratories	
NEN-EN-ISO/IEC 17065	Conformity assessment - Requirements for bodies certifying products, processes, and services	
NEN 6075	Determination of the resistance to smoke movement between spaces, July 1991, including modification sheet NEN 6075/A1.	
EN 15154-1	Emergency safety showers - Part 1: Plumbed-in body showers for laboratories	
EN 15154-2	Emergency safety showers - Part 2: Plumbed-in eye wash units	
EN 248	Sanitary tapware - General specification for electrodeposited coatings of Ni-Cr	
BRL-K629	Anti-pollution check valves - family E, type A, B, C, D	

*) If no date of issuance is specified in this column, the current version of the document applies.

Remark: if standards or normative documents are dated:

An annual verification will take place to verify if the normative documents are still up to date. Modifications of the applicable normative documents will be published on the services page of Kiwa's website.

_

¹ Effective July 1, 2017

I Model certificate (example)



Product certificate KXXXXXXX/0X



1 of 1



Name product

STATEMENT BY KIWA

With this product certificate, issued in accordance with the Kiwa Regulations for Certification, Kiwa declares that legitimate confidence exists that the products supplied by

Name customer

as specified in this product certificate and marked with the Kiwa®-mark in the manner as indicated in this product certificate may, on delivery, be relied upon to comply with Kiwa evaluation guideline

inclusive amendment sheet dated dd-mm-yyyy.

Name Director

Publication of this certificate is allowed.

Advice: consult www.klwa.nl in order to ensure that this certificate is still valid.

Kiwa Nederland B.V. Sir Winston Churchillaan 273 2280 AB RIJSWIJK The Netherlands Tel. +31 88 998 44 00 Fax +31 88 998 44 20

info@kiwa.nl

www.ldwa.nl

Fax number

Email

Phone number

Address customer

Certification process consists of initial and regular assessment of:

quality system product

Evaluation Guideline © Kiwa Nederland B.V.

II Model IQC Scheme (example)

Inspection subjects	Inspection aspects	Inspection method	Inspection frequency	Inspection registration
Raw materials or supplied materials: Receiving inspection raw materials				
Production process, production equipment, other equipment: Procedures Working instructions Equipment Other equipment				
Finished products				
Measuring and testing equipment • Measuring equipment • Calibration				
Logistics				