SAFETY DATA SHEET



PolyEthylene Oxide Standard

Section 1. Identification

1.1 Product identifier

Product name : PolyEthylene Oxide Standard

Part no. : PL2080-0101, PL2080-0201, PL2080-0200, PL2080-0202, PL2080-0203, PL2084-2010,

PL2084-2001, PL2084-2005, PL2083-5010, PL2083-5001, PL2083-5005, PL2083-6010, PL2083-6001, PL2083-6005, PL2084-1010, PL2084-1001, PL2084-1005, PL2083-7010, PL2083-7001, PL2083-7005, PL2083-1001, PL2083-1005, PL2083-8010, PL2083-8001, PL2083-8005, PL2083-2010, PL2083-2001, PL2083-2005, PL2083-9010, PL2083-9001, PL2083-9005, PL2083-3010, PL2083-3001, PL2083-3005, PL2084-0010, PL2084-0001,

PL2084-0005, PL2083-4010, PL2083-4001, PL2083-4005, PL2083-1010

Validation date : 4/30/2020

1.2 Relevant identified uses of the substance or mixture and uses advised against

Material uses : Reagents and Standards for Analytical Chemistry Laboratory Use

PL2080-0101 PEO calibration kit
PL2080-0201 EASIVIAL PEG/PEO 2 ML
PL2080-0200 EASIVIAL PEG/PEO 4 ML

PL2080-0202 PEG/PEO 2 ML TRI-PACK (90 VIALS) PL2080-0203 PEG/PEO 4 ML TRI-PACK (90 VIALS)

PL2084-2010 PEO NOMINAL MP 1.5M 10G PEO NOMINAL MP 1.5M 1G PL2084-2001 PEO NOMINAL MP 1.5M 5G PL2084-2005 PEO NOMINAL MP 100K 10G PL2083-5010 PL2083-5001 PEO NOMINAL MP 100K 1G PL2083-5005 PEO NOMINAL MP 100K 5G PL2083-6010 PEO NOMINAL MP 130K 10G PEO NOMINAL MP 130K 1G PL2083-6001 PL2083-6005 PEO NOMINAL MP 130K 5G PL2084-1010 PEO NOMINAL MP 1M 10G PEO NOMINAL MP 1M 1G PL2084-1001 PL2084-1005 PEO NOMINAL MP 1M 5G PL2083-7010 PEO NOMINAL MP 200K 10G PEO NOMINAL MP 200K 1G PL2083-7001

PL2083-7005 PEO NOMINAL MP 200K 5G PEO NOMINAL MP 20K 1G PL2083-1001 PL2083-1005 PEO NOMINAL MP 20K 5G PL2083-8010 PEO NOMINAL MP 300K 10G PEO NOMINAL MP 300K 1G PL2083-8001 PI 2083-8005 PEO NOMINAL MP 300K 5G PL2083-2010 PEO NOMINAL MP 30K 10G PL2083-2001 PEO NOMINAL MP 30K 1G PEO NOMINAL MP 30K 5G PL2083-2005

PL2083-9010 PEO NOMINAL MP 500K 10G
PL2083-9001 PEO NOMINAL MP 500K 1G
PL2083-9005 PEO NOMINAL MP 500K 5G
PL2083-3010 PEO NOMINAL MP 50K 10G
PL2083-3001 PEO NOMINAL MP 50K 1G
PL2083-3005 PEO NOMINAL MP 50K 5G
PL2084-0010 PEO NOMINAL MP 700K 10G

PL2084-0001 PEO NOMINAL MP 700K 1G PL2084-0005 PEO NOMINAL MP 700K 5G PL2083-4010 PEO NOMINAL MP 70K 10G PL2083-4001 PEO NOMINAL MP 70K 1G

PL2083-4005 PEO NOMINAL MP 70K 5G PL2083-1010 PEO NOMINAL MP 20K 10G

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Section 1. Identification

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer: Agilent Technologies, Inc.

5301 Stevens Creek Blvd Santa Clara, CA 95051, USA

800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard

(29 CFR 1910.1200).

Classification of the substance or mixture

COMBUSTIBLE DUSTS

H320 EYE IRRITATION - Category 2B

2.2 GHS label elements

Signal word : Warning

Hazard statements : ►320 - Causes eye irritation.

May form combustible dust concentrations in air.

Precautionary statements

Prevention : Not applicable.

Response : P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.

Storage : Not applicable.

Disposal : Not applicable.

Disposar . Mot applicable

Supplemental label : Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames elements and other ignition sources. No smoking. Prevent dust accumulation.

2.3 Other hazards

Hazards not otherwise : None known.

classified

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Ingredient name	%	CAS number
Polyethylene glycol	100	25322-68-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

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Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact : Immediately flu

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10

minutes. If irritation persists, get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If

not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar,

tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and

shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean

shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and

keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes eye irritation.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits

may cause irritation of the nose, throat and lungs.

Skin contactIngestionNo known significant effects or critical hazards.No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:

irritation watering redness

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

Skin contact: No specific data.Ingestion: No specific data.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. It may

be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

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Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

: Use dry chemical powder.

Unsuitable extinguishing media

 Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical

: May form explosible dust-air mixture if dispersed.

Hazardous thermal decomposition products

 Decomposition products may include the following materials: carbon dioxide

carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up

: Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

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Section 7. Handling and storage

Protective measures

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Estore in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations

: Industrial applications, Professional applications.

Industrial sector specific solutions

: Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Polyethylene glycol	AIHA WEEL (United States, 7/2018). TWA: 10 mg/m³ 8 hours.

8.2 Exposure controls

Appropriate engineering controls

: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

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Section 8. Exposure controls/personal protection

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. If operating conditions cause high dust concentrations to be produced, use dust goggles.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Solid. [Powder. (Molecular weight (low) = liquid, Molecular weight (high) = Solid.)]

Color : White.
Odor : Odorless.
Odor threshold : Not available.
pH : Not available.
Melting point : Various

Boiling point : 250°C (482°F)

Flash point : Closed cup: 171 to 235°C (339.8 to 455°F) Open cup: 199 to 238°C (390.2 to 460.4°F)

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive : Not available.

(flammable) limits

Vapor pressure : 0 kPa (0 mm Hg) [room temperature]

Vapor density : Not available.

Relative density : 1.1 to 1.3 [Water = 1] **Density** : 1.13 g/cm³ [25°C (77°F)]

Solubility : Soluble in the following materials: cold water and hot water.

Solubility in water : 620 g/l

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Section 9. Physical and chemical properties

Partition coefficient: n-

octanol/water

Viscosity

: Not available.

Auto-ignition temperature

Decomposition temperature

: 360°C (680°F): Not available.: Not available.

Section 10. Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Avoid the creation of dust when handling and avoid all possible sources of ignition

(spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust

: Under normal conditions of storage and use, hazardous decomposition products should

accumulation.

10.5 Incompatible materials : Reactive or incompatible with the following materials:

oxidizing materials

Oxidizing materials

10.6 Hazardous decomposition products

not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Polyethylene glycol	Eyes - Mild irritant	Rabbit	-	24 hours 500	-
	Eyes - Mild irritant	Rabbit	_	mg 500 mg	_
	Skin - Mild irritant	Rabbit	-	24 hours 500	-
	Skin - Mild irritant	Rabbit	-	mg 500 mg	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary: Not available.

Reproductive toxicity

Conclusion/Summary: Not available.

Teratogenicity

Conclusion/Summary: Not available.

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Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely

: Routes of entry anticipated: Oral, Dermal, Inhalation.

routes of exposure

Potential acute health effects

Eye contact : Causes eye irritation.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits

may cause irritation of the nose, throat and lungs.

Skin contactIngestionNo known significant effects or critical hazards.No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: Adverse symptoms may include the following:

irritation watering redness

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Long term exposure

Potential immediate : Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

General : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Carcinogenicity
 No known significant effects or critical hazards.
 Mutagenicity
 No known significant effects or critical hazards.
 Teratogenicity
 No known significant effects or critical hazards.
 Developmental effects
 No known significant effects or critical hazards.
 Fertility effects
 No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

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Section 11. Toxicological information

Product/ingredient name	((mg/kg)	(3 /	(vapors)	Inhalation (dusts and mists) (mg/ I)
Polyethylene glycol	28000	N/A	N/A	N/A	N/A

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Polyethylene glycol	Acute LC50 >1000000 μg/l Fresh water	Fish - Salmo salar - Parr	96 hours

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Polyethylene glycol	-	3.2	low

12.4 Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

12.5 Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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Section 13. Disposal considerations

for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / : Not regulated.

IATA

Special precautions for user : Transport within user's premises: always transport in closed containers that are

upright and secure. Ensure that persons transporting the product know what to do in the

event of an accident or spillage.

Transport in bulk according: Not available.

to IMO instruments

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: This material is listed or exempted.

Clean Air Act Section 112

(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602

Class I Substances

: Not listed

Clean Air Act Section 602

Class II Substances

: Not listed

DEA List I Chemicals

: Not listed

(Precursor Chemicals)

DEA List II Chemicals

: Not listed

(Essential Chemicals)

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : COMBUSTIBLE DUSTS

EYE IRRITATION - Category 2B

Composition/information on ingredients

Name	%	Classification
Polyethylene glycol	100	COMBUSTIBLE DUSTS EYE IRRITATION - Category 2B

State regulations

Massachusetts : This material is not listed. **New York** This material is not listed. : This material is not listed. **New Jersey Pennsylvania** : This material is not listed.

California Prop. 65

▼his product does not require a Safe Harbor warning under California Prop. 65.

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Section 15. Regulatory information

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : This material is listed or exempted.

Canada : This material is listed or exempted.

China : This material is listed or exempted.

Europe : This material is listed or exempted.

Japan : Japan inventory (ENCS): This material is listed or exempted.

Japan inventory (ISHL): This material is listed or exempted.

New Zealand: This material is listed or exempted.Philippines: This material is listed or exempted.Republic of Korea: This material is listed or exempted.Taiwan: This material is listed or exempted.

Thailand : Not determined.

Section 16. Other information

History

Date of issue : 04/30/2020 Date of previous issue : 04/30/2018

Version : 5

Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973

as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not available
UN = United Nations

Procedure used to derive the classification

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Section 16. Other information

Classification	Justification
ØOMBUSTIBLE DUSTS EYE IRRITATION - Category 2B	On basis of test data On basis of test data

[✓] Indicates information that has changed from previously issued version.

Notice to reader

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