

SAFETY DATA SHEET

CITGO Transformer Oil N-II



Section 1. Identification

GHS product identifier	: CITGO Transformer Oil N-II
Synonyms	: Insulating Oil
Code	: 669490001
Supplier's details	: CITGO Petroleum Corporation P.O. Box 4689 Houston, TX 77210 sdsvend@citgo.com
Emergency telephone number (with hours of operation)	: Technical Contact: (800) 248-4684 Medical Emergency: (832) 486-4700 CHEMTREC Emergency: (800) 424-9300 (United States Only)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : ASPIRATION HAZARD - Category 1
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : May be fatal if swallowed and enters airways.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General : Avoid contact with eyes, skin and clothing. Thoroughly wash exposed areas and clothing with soap and water. IF IN EYES: Rinse cautiously with water for several minutes. IF SWALLOWED: Do not induce vomiting. If you feel unwell, seek medical attention and show the label when possible. Keep out of reach of children.

Prevention : Avoid release to the environment.

Response : IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

Storage : Store locked up. Store in a dry place and/or in closed container. Store in accordance with all local, regional, national and international regulations.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Other means of identification : Insulating Oil

CAS number/other identifiers

CAS number : Not applicable.

Ingredient name	%	CAS number
Distillates, petroleum, hydrotreated, light naphthenic	≥50 - ≤75	64742-53-6
Distillates (petroleum), hydrotreated middle	≥25 - ≤50	64742-46-7
2,6-di-tert-butyl-p-cresol	≤3	128-37-0

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

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : 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. Get medical attention if irritation occurs.
- 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** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

Section 4. First aid measures

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

- Notes to physician** : If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.
- Specific treatments** : Treat symptomatically and supportively.
- 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)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

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.

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

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. Avoid breathing vapor or mist. 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".

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). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. 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. Store locked up. 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.
- Bulk Storage Conditions: Maintain all storage tanks in accordance with applicable regulations. Use necessary controls to monitor tank inventories. Inspect all storage tanks on a periodic basis. Test tanks and associated piping for tightness. Maintain the automatic leak detection devices to assure proper working condition.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Distillates, petroleum, hydrotreated, light naphthenic

ACGIH TLV (United States, 3/2019).

TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction

OSHA PEL (United States, 5/2018).

TWA: 5 mg/m³ 8 hours.

NIOSH REL (United States, 10/2016).

TWA: 5 mg/m³ 10 hours. Form: Mist

STEL: 10 mg/m³ 15 minutes. Form: Mist

Distillates (petroleum), hydrotreated middle

NIOSH REL (United States, 10/2016).

TWA: 5 mg/m³ 10 hours. Form: Mist

STEL: 10 mg/m³ 15 minutes. Form: Mist

2,6-di-tert-butyl-p-cresol

ACGIH TLV (United States, 3/2019).

TWA: 2 mg/m³ 8 hours. Form: Inhalable fraction and vapor

NIOSH REL (United States, 10/2016).

TWA: 10 mg/m³ 10 hours.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Section 8. Exposure controls/personal protection

- 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, vapor controls, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- 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 glasses equipped with side shields are recommended as minimum protection in industrial settings. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. 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 inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Avoid skin contact with liquid. Chemical-resistant 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. Leather gloves are not protective for liquid contact.
- 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** : Avoid skin contact with liquid. 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. Leather boots are not protective for liquid contact.
- Respiratory protection** : Avoid inhalation of gases, vapors, mists or dusts. Use a properly fitted, air-purifying or supplied-air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Colorless. Yellowish. [Light]
- Odor** : Not available.
- pH** : Not available.
- Boiling point** : Not available.
- Flash point** : Open cup: 145°C (293°F)
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : Not available.
- Density gm/cm³** : 0.8792 g/cm³ [15°C (59°F)]
- Gravity, °API** : 29.4
- Flow time (ISO 2431)** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): 0.0899 cm²/s (8.99 cSt)

Section 9. Physical and chemical properties

Viscosity SUS : Estimated 42 SUS @104 F

Section 10. Stability and reactivity

Reactivity : Not expected to be Explosive, Self-Reactive, Self-Heating, or an Organic Peroxide under US GHS Definition(s).

Chemical stability : The product is stable.

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

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Distillates, petroleum, hydrotreated, light naphthenic	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-
Distillates (petroleum), hydrotreated middle 2,6-di-tert-butyl-p-cresol	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Mouse	650 mg/kg	-
	LD50 Oral	Rat	890 mg/kg	-
	LD50 Oral	Rat	890 mg/kg	-

Conclusion/Summary : **Distillates (petroleum), hydrotreated light naphthenic**: INHALATION (LC50) Acute: 9.6 mg/L (Female Rat).
 INHALATION (LC50) Acute: 10.5 mg/L (Male Rat).
 DRAIZE EYE Acute: Non-irritating (Rabbit).
 DRAIZE DERMAL Acute: Mild skin irritant (Rabbit).
 BUEHLER DERMAL Acute: Non-sensitizing (Guinea Pig).
 28-Day DERMAL Sub-Chronic: Mild to moderate skin irritant (Rabbit & Rat).

A life-time dermal application of severely hydrotreated light naphthenic oils produced skin masses on mice which correlated with the skin irritation response levels of the test animals. Additional studies attribute these masses to a weak promotional activity. These studies indicate that light naphthenic oils are not mutagenic, tumor initiators nor complete chemical carcinogens. These materials have not been determined to be carcinogenic by IARC, NTP or OSHA.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Distillates, petroleum, hydrotreated, light naphthenic 2,6-di-tert-butyl-p-cresol	Skin - Moderate irritant	Rabbit	-	24 hours 0.5 MI	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Skin - Mild irritant	Human	-	48 hours 500 mg	-
	Skin - Moderate irritant	Rabbit	-	48 hours 500 mg	-

Skin : No additional information.

Section 11. Toxicological information

Eyes : No additional information.

Respiratory : No additional information.

Sensitization

Not available.

Skin : No additional information.

Respiratory : No additional information.

Mutagenicity

Not available.

Conclusion/Summary : No additional information.

Carcinogenicity

Not available.

Conclusion/Summary : No additional information.

Classification

Product/ingredient name	OSHA	IARC	NTP
2,6-di-tert-butyl-p-cresol	-	3	-

Reproductive toxicity

Not available.

Conclusion/Summary : No additional information.

Teratogenicity

Not available.

Conclusion/Summary : No additional information.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Name	Result
Distillates, petroleum, hydrotreated, light naphthenic	ASPIRATION HAZARD - Category 1
Distillates (petroleum), hydrotreated middle	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Section 11. Toxicological information

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

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.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2,6-di-tert-butyl-p-cresol	Acute EC50 1440 µg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours

Conclusion/Summary : Not available.

Persistence and degradability

Conclusion/Summary : Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2,6-di-tert-butyl-p-cresol	5.1	330 to 1800	high

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

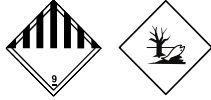

Section 13. Disposal considerations

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

Section 13. Disposal considerations

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.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	3082	3082
UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,6-di-tert-butylp-cresol) Marine Pollutant (2,6-di-tert-butylp-cresol) (2,6-di-tert-butyl-p-cresol)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,6-di-tert-butylp-cresol) (2,6-di-tert-butyl-p-cresol)
Transport hazard class(es)	-	9 	9 
Packing group	-	III	III
Environmental hazards	No.	Yes.	Yes.

Additional information

TDG Classification

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark). Non-bulk packages of this product are not regulated as dangerous goods when transported by road or rail.

IMDG

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IATA

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

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 to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **United States inventory (TSCA 8b):** All components are listed or exempted.
Clean Water Act (CWA) 307: chrysene; benz[a]anthracene
 This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

SARA 302/304

Section 15. Regulatory information

Composition/information on ingredients

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : ASPIRATION HAZARD - Category 1

Composition/information on ingredients

Name	%	Classification
Distillates, petroleum, hydrotreated, light naphthenic	≥50 - ≤75	ASPIRATION HAZARD - Category 1
Distillates (petroleum), hydrotreated middle	≥25 - ≤50	FLAMMABLE LIQUIDS - Category 4 ASPIRATION HAZARD - Category 1
2,6-di-tert-butyl-p-cresol	≤3	ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A

SARA 313


	Product name	CAS number	%
Form R - Reporting requirements	chrysene	218-01-9	<0.001
	benz[a]anthracene	56-55-3	<0.001

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: OIL MIST, MINERAL; 2,6-di-tert-butyl-p-cresol
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: MINERAL OIL (UNTREATED and MILDLY TREATED); 2,6-DI-tert-BUTYL-p-CRESOL; PHENOL, 2,6-BIS(1,1-DIMETHYLETHYL)-4-METHYL-
- Pennsylvania** : The following components are listed: 2,6-di-tert-butyl-p-cresol

California Prop. 65 Clear and Reasonable Warnings (2018)

 **WARNING:** This product can expose you to chemicals including Chrysene, Benz[a]anthracene, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

International regulations

Inventory list

- United States** : All components are listed or exempted.
- Australia** : Not determined.
- Canada** : At least one component is not listed in DSL but all such components are listed in NDSL.
- China** : Not determined.
- Europe** : All components are listed or exempted.
- Japan** : **Japan inventory (ENCS):** Not determined.
Japan inventory (ISHL): Not determined.
- Malaysia** : Not determined.
- New Zealand** : All components are listed or exempted.
- Philippines** : Not determined.
- Republic of Korea** : Not determined.
- Taiwan** : All components are listed or exempted.
- Thailand** : Not determined.
- Turkey** : Not determined.
- Viet Nam** : All components are listed or exempted.

Section 16. Other information

[National Fire Protection Association \(U.S.A.\)](#)



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[Procedure used to derive the classification](#)

Classification	Justification
ASPIRATION HAZARD - Category 1	Calculation method
AQUATIC HAZARD (ACUTE) - Category 3	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method

[History](#)

Date of printing	: 4/22/2020
Date of issue/Date of revision	: 4/22/2020
Date of previous issue	: No previous validation
Version	: 1

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) UN = United Nations
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References	: Not available.
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☑ Indicates information that has changed from previously issued version.

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