

TECHNICAL DATA SHEET

Ferric Chloride 30% Water Treatment Grade

Technical

CAS NUMBER	ALLIANCE CODE	GENERATED
7705-08-0	ferric-chloride-30	2026-09-01
REVISION	REVIEWED	
1.5	2026-07-17 · Andre Taki	

IDENTITY & COMPOSITION

PRODUCT NAME	ALLIANCE CODE
Ferric Chloride 30% Water Treatment Grade	ferric-chloride-30
GRADE	CONCENTRATION
Technical	—
CAS NUMBER	FORMULA
7705-08-0 PubChem	Cl3Fe PubChem
MOLECULAR WEIGHT	PRODUCT TYPE
162.20 PubChem	solution

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Assay (FeCl3)	29.5 – 30.5 %	30.0 %	—	Commercial practice
Ferrous chloride (FeCl2)	1.9 % max	0.068 %	—	Derived by dilution
Ferrous (as Fe2)	Max 0.375% (w/w)	0.030% (w/w)	—	Derived by dilution

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Iron (Fe, total)	10.05 – 10.65 %	10.35 %	—	Derived by dilution
Free Acid (as HCl)	Max 0.5625% (w/w)	0.225% (w/w)	—	Derived by dilution
Insoluble Matter	Max 0.075% (w/w)	0.015% (w/w)	—	Derived by dilution
Sulfate (SO ₄ 2-)	< 0.4 %	0.060 %	Turbidimetric, BaCl ₂ / ASTM D516	Interpreted
Arsenic (As)	Max 2.5 mg/kg	0.30 mg/kg	ICP-MS / EPA 200.8	Interpreted
Lead (Pb)	Max 4 mg/kg	0.38 mg/kg	ICP-MS / EPA 200.8	Interpreted
Mercury (Hg)	Max 0.4 mg/kg	0.004 mg/kg	Cold vapour AAS / EPA 245.1	Interpreted

Specification values are guaranteed limits. Typical values are representative of production lots and are not guaranteed. Lot-specific certificates of analysis ship with every order.

AVAILABLE GRADES SAME CAS, ALTERNATE GRADES AND CONCENTRATIONS

GRADE	CONCENTRATION	TYPICAL ASSAY	SKU
THIS GRADE Technical	—	—	current
Reagent	40%	—	ferric-chloride-40
Technical	10%	—	ferric-chloride-10
Technical	—	—	ferric-chloride-20

Typical assay shown is the rolling-window mean from the sibling product's most recent lots. Grade selection drives downstream end-use — verify the sibling grade matches your specification before substitution.

PHYSICAL & CHEMICAL PROPERTIES

PROPERTY	VALUE	SOURCE
pH	< 1.5	Interpreted
Specific Gravity (20 °C)	1.295 – 1.315	Interpreted

MATERIALS OF CONSTRUCTION

MATERIAL	RATING	CONDITIONS	SOURCE
fiberglass tank	Compatible	—	scribd.com
plastic tank (type unspecified)	Compatible	—	scribd.com
metals (unspecified)	Not recommended	—	thaichloride.com
fiberglass	Compatible	—	scribd.com
plastic	Compatible	—	scribd.com

Compatibility is drawn from published manufacturer and supplier documentation for this product; each rating is sourced. Confirm against your specific duty cycle before equipment selection.

REGULATORY & TRANSPORT

DOT / 49 CFR

UN NUMBER

UN2582 [Adjudicated](#)

PACKING GROUP

III [Adjudicated](#)

HAZARD CLASS

8 [Adjudicated](#)

PROPER SHIPPING NAME

Ferric chloride, solution [Adjudicated](#)

GHS / OSHA HAZCOM 2012

SIGNAL WORD

Danger [Adjudicated](#)

H-CODES (HAZARD STATEMENTS)

H290, H302, H314, H315, H318, H412

[Adjudicated](#)

P-CODES (PRECAUTIONARY STATEMENTS)

P234, P260, P264, P270, P273, P280,
P301+P312, P301+P330+P331, P302+P352,
P303+P361+P353, P304+P340,
P305+P351+P338, P310, P313, P321, P330,
P332+P313, P362, P363, P390, P405, P406,
P501

[Adjudicated](#)

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

— [no canonical](#)

ACGIH TLV

— [no canonical](#)

NIOSH REL

— [no canonical](#)

NIOSH IDLH

— [no canonical](#)

Transport descriptions reflect 49 CFR 172.101 lookup at time of publication. Sourced data: ECHA CLP Annex VI for harmonised classifications, NIOSH Pocket Guide for REL/IDLH, OSHA Z-Tables for PEL. Always verify against the latest regulatory text before shipment-critical decisions.

APPLICATIONS

Coagulant for water quality improvement, municipal wastewater treatment, and industrial wastewater treatment

[thaichloride.com](#)

Removal of phosphates and heavy metals (lead, cadmium, mercury) from wastewater

[thaichloride.com](#)

Dissolving metals such as copper and zinc (metal etching / pickling) [thaichloride.com](#)

Coagulant for potable water and wastewater treatment [scribd.com](#)

Applications are drawn from published manufacturer and supplier documentation; each is sourced. Suitability for a specific use is the buyer's to confirm.

STORAGE & HANDLING

RECOMMENDED STORAGE

Store in a dry place, away from sources of ignition and heat. Avoid direct sunlight and keep in a well-ventilated area. Once opened, use within a limited time.

thaichloride.com

INCOMPATIBILITIES

Specific incompatibilities depend on the salt — consult the SDS. Many salts react with strong acids to release gases.

Class-level guidance — not product-specific; the SDS controls.

For full hazard, PPE, and emergency response guidance, refer to the Safety Data Sheet (SDS) for this product. The SDS controls in all cases where guidance differs.

HANDLING PRECAUTIONS

Standard chemical PPE — dust mask and goggles for handling of fine grades. Avoid generating airborne dust.

Class-level guidance — not product-specific; the SDS controls.

SHELF LIFE

Consult Technical Services for product-specific shelf life

PACKAGING & LOGISTICS

SHIPPING DESCRIPTION (US DOT)

UN2582, Ferric chloride, solution, 8, PG III

Sourced from 49 CFR 172.101. Confirm against shipping documents and carrier requirements before tender.

NMFC CLASS 65	PLACARD Corrosive	PACKING GROUP PG III
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REVISION HISTORY

Last reviewed 2026-07-17 by Andre Taki, DOT Hazmat Specialist.

VERSION	DATE	CHANGE	TRIGGER
1.5	2026-08-19	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. unNumber · canonical change (coa.data_provenance / adjudication)	canonical_change

VERSION	DATE	CHANGE	TRIGGER
1.4	2026-08-05	Canonical data updated: 4 fields changed via the provenance/adjudication pipeline. - hazardClass · canonical change (coa.data_provenance / adjudication) - packingGroup · canonical change (coa.data_provenance / adjudication) - signalWord · canonical change (coa.data_provenance / adjudication) - unNumber · canonical change (coa.data_provenance / adjudication)	canonical_change
1.3	2026-07-22	Canonical data updated: 3 fields changed via the provenance/adjudication pipeline. - dotSubsidiaryHazardClass · canonical change (coa.data_provenance / adjudication) - dotProperShippingName · canonical change (coa.data_provenance / adjudication) - ghsClassification · canonical change (coa.data_provenance / adjudication)	canonical_change
1.1	2026-07-17	Canonical data re-verified: 5 fields updated against independent vendor SDSs, CLP Annex VI, 49 CFR, and OSHA HazCom 2024 (GHS classification, hazard/precautionary codes, signal word, physical properties as applicable). - countryOfOrigin · canonical adjudication / reground (coa.data_provenance) - ghsClassification · canonical adjudication / reground (coa.data_provenance) - hazard_h_codes · canonical adjudication / reground (coa.data_provenance) - hazard_p_codes · canonical adjudication / reground (coa.data_provenance) - hsCode · canonical adjudication / reground (coa.data_provenance)	canonical_change
1.2	2026-07-17	Canonical data updated: 3 fields changed via the provenance/adjudication pipeline. - ghsClassification · canonical change (coa.data_provenance / adjudication) - hazard_h_codes · canonical change (coa.data_provenance / adjudication) - hazard_p_codes · canonical change (coa.data_provenance / adjudication)	canonical_change
1.0	2026-05-20	Initial URL—first TDS published from canonical chemistry registry.	initial

This Technical Data Sheet is provided for technical reference. The Safety Data Sheet (SDS) controls in all cases where guidance differs. Values reflect Alliance Chemical canonical data at time of generation; subsequent revisions are recorded in the Revision History above.