



## RM-REF-Shred Quality Specification

Location(s)	Department / Machine Center / Work Center	Document and Rev #		Revision Date
Oswego		PRO-04458	4	July 22, 2025

# Shred Quality Specification

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**Approved by: Timothy Howard**

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NONE



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## 1.0 PURPOSE:

Novelis is a supplier to discerning customers of a wide variety of rolled aluminum products. Novelis' visibility in these markets depends on its' ability to consistently supply aluminum of the highest quality. A major factor in our ability to meet this requirement is the quality of the raw material we purchase for our processes with shred representing a meaningful percentage of our raw material mix.

It is for this reason that we have developed this manual, the major purpose being to communicate as clearly as possible the Novelis requirements for shred. The philosophy of Novelis is to work with all of its suppliers to enable them to continuously improve the quality of materials delivered.

## 2.0 Health, Safety, and Environmental Guidelines

- 2.1 Water poses a MAJOR EXPLOSION RISK when combined with molten metal. All forms of scrap that have potentially been introduced to water, or the following: containers, or bottles, crimped tubing and other closed containers, water filled bales, fiber/cardboard cored coils, desiccant, paper interleaved coils and wrapped coils/bales are all common hiding places for water in some form or another; incoming loads containing any of these items are subject to rejection.
- 2.2 Other causes of explosion may occur, so all scrap must be clean and free of fertilizers, explosives, aluminum fines, nitrates, sulfates, oxidizers, butane lighters, welding equipment, propane tanks, unknown powders, salts, dross, excessive mold release agents, pot room bath, corrosion, dirt, gravel, volatile substances, non-aluminum contaminants, closed containers, crimped tubing, PCB's, radioactive materials and aluminum-lithium alloys, and other flammable materials. Any loads containing these or other questionable substances are subject to rejection.
- 2.3 Coatings can cause excessive flaring and damage pollution controls. Hence, oils and process lubes are limited to 1% by weight of the scrap. Painted, lacquered or coated scrap is also not acceptable.
  - As it may contain likely contain coatings, should UBC shred be purchased by Novelis, Novelis should be notified prior so that the company can take proper means to control flaring and pollution.
- 2.4 Documentation of the proper chemical analysis is critical to the final properties of our end product. Thus, any individual piece or bundle of scrap must be composed of a single alloy or a known and acknowledged alloy grouping.
  - a) The alloy or grouping must be clearly and permanently identified with the scrap along with the gross, tare, and net weight. Any grouping must be reviewed on a regular basis as defined by the agreement and procedure.

## 3.0 PACKAGING REQUIREMENTS:

The presence of the following items in a load of shred are hazardous to the employees of Novelis and as such are cause for immediate rejection and possible disqualification due to the threat they pose to site employees.

- a) Paper/Plastics
- b) Iron/Steel
- c) Aerosol cans containing liquid
- d) Live ammunition/explosives
- e) Butane lighters
- f) Fertilizers/oxidizers
- g) Containers of liquid
- h) Closed Containers
- i) Oxides (rust/corrosion)
- j) Radioactive sources



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- k) Unidentifiable materials/substance
- l) Infestation of the UBC by insects, rodents, etc.
- m) Batteries (lead cell)

## 4.0 GENERAL QUALITY:

- To become a qualified supplier with Novelis, a trial load of shred must be first run through a Novelis facility. Please contact your Novelis buyer to schedule a trial.
- The maximum size of a shred piece should not exceed 2.5" X 2.5" at Berea & Oswego and 1.5" X 1.5" at Greensboro.
- For OSWEGO Arc specifically:
  - o Shred: Strips of aluminum between 1" and 4" wide x between 8" and 18" long x between 1/16" and 1/4" thick, material will be somewhat twisted and bent
  - o Material Density: 8 to 30 lbs/ft<sup>3</sup>
- Each piece should be as flat as possible.
- All shred material must be magnetically separated prior to shipment to Novelis facilities.
- Material that does not meet the requirements of this Shred Specification is subject to rejection. To remain a fully qualified supplier, it is expected that the supplier will document the corrective actions taken to eliminate the cause(s) of their failure to fully satisfy the specification and compensate Novelis for any costs associated with a non-conformance.
- All shred material should be produced from shredded aluminum scrap rather than cast aluminum.



**Good Quality Shred**



**Poor Quality Shred**

## 5.0 3XXX SHRED CHEMISTRY:

- The below elements for 3XXX shred are not to exceed:

Si	.60
Cu	.30
Zn	.30
Pb	.019
Fe	.60

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## 6.0 SCRAP DELIVERY AND UNLOADING POLICY:

- Trucks:
  - Shred must be delivered in a flat-bottom dump truck or a truck that has a walking floor trailer. The vehicle must be clean and tarped with a waterproof tarp. Screen tarps allow water into the vehicle, and trucks that arrive with a screen tarp are subject to rejection.
  
- Delivery Schedule:
  - In the interest of both parties as well as the shipping companies involved, efficient and safe delivery of material is critical for keeping shipping costs down. As a result, ALL MATERIAL must have a delivery appointment. Novelis is not responsible for any costs that may be incurred because a load arrives before a scheduled delivery appointment. Unloading hours are 24 hours/day 7 days/week, unless specified.
  - All deliveries, as well as any material purchased from an outside supplier, must have an SRA and delivery appointment that was created in our MPS system. If you need access to the MPS system, please contact your Buyer or Coordinator.

## 7.0 RADIATION POLICY & INDEMNIFICATION:

- The supplier warrants that none of the material purchased or delivered is or contains radioactive materials.
- The supplier agrees to defend, indemnify and hold Novelis and its subsidiaries, affiliates, and directors, officers, employees, agents and representatives (“Novelis Indemnities”) from any and all claims, demands, damages, liabilities, costs, expenses and fees (including reasonable attorney’s fees), arising out of, resulting from or relating to, in whole or in part, a breach of the foregoing warranty.
- The supplier understands that its material will be tested before and after acceptance by Novelis, and Novelis has the right to revoke the acceptance of the materials at any time. If radioactive material is discovered, Novelis may option, without prior notice or approval from the supplier, to undertake handling/disposal of and/or clean up the radioactive material. All costs, fees and expenses associated with the handling, disposal and cleanup, and the return of the shipment, whether or not undertaken exclusively by Novelis, will be the responsibility of the supplier, and the supplier shall release, defend, indemnify and exempt Novelis from any and all claims, demands, damages, liabilities, costs, expenses, fees and penalties arising out of, resulting from, or relating to, in whole or in part of: handling/disposal, and cleanup. Supplier further agrees to waive any claims, rights and defenses

which it might otherwise have against Novelis Indemnities arising out of, resulting from, or relating to the handling, disposal of, and cleanup of the radioactive material by Novelis.

- Each purchase order is contingent upon the supplier’s acceptance of these terms. Supplier acknowledges that delivery of any material to Novelis is considered acceptance of these terms, and agrees that any terms and conditions contained in a proposal, quotation, acknowledgement, acceptance, invoice or other document of supplier which are different from or in addition to these terms and conditions shall not constitute a part of the purchase order and are hereby expressly rejected, and that no employee of the Novelis is authorized to or may waive or modify these terms.

## 8.0 REJECTION POLICY:

- The Scrap Champion or Crew Leader determines if any part of the load is unacceptable for any of the preceding reasons involving safety, quality of material, signed purchase order, or delivery.
- The Buyer will notify the supplier concerning the rejection. The supplier is responsible for all freight and reloading costs to ship the rejected load from Novelis. Photos showing the cause for rejection will be sent to the supplier.
- Rejected material must be removed promptly. If the rejected material is not removed within 5 business days, the rejected material will be sent, collect, to the vendor or location of the vendor’s choice. The purchase order shall remain open, subject to the original terms and conditions.

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## 9.0 INSPECTION & SAMPLING:

- Each load of purchased scrap will be examined upon receipt for compliance with the description of the material on the purchase order. The material will also be sampled for chemical composition. The method and frequency of inspection and sampling will be at Novelis' discretion. A failed physical inspection or chemical analysis may result in the load being rejected or downgraded.
- If a scrap charge causes an off-analysis furnace, the vendor who supplied the material will be responsible for all charges related to the incident.

## 10.0 SHIPPING DOCUMENTATION:

- The driver must provide the following core shipment information. This information must appear on the Bill of Lading and is required for all shipments:
  - a) SRA number (Shipping Request Authorization)
  - b) Shipper name, city and state
  - c) Type of product (alloy) & form (Baled, densified, etc.)
  - d) Piece count
  - e) Indicate actual scale weight or an estimated weight, which must be marked "estimated"
  - f) Dunnage
  - g) Ship date
  - h) Certification: "This shipment is being transported for the purpose of recycling as defined in the applicable tariffs containing such provisions".
  - i) Duplicate bill of lading is required at the receiving location.

## 11.0 INSURANCE:

- Each vendor selling scrap to Novelis will have and maintain adequate minimum insurance coverage including but not limited to, general and products liability insurance coverage, protecting both Novelis and supplier from any and all claims and liabilities for property damage, personal injury, death and economic damage, that arise from the material and associated activities hereunder, endorsed as required, at all times while conducting business with Novelis.

\*\*\* Specifications are subject to change without prior notice \*\*\*